

No. 21-2017 (L)

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**In the  
United States Court of Appeals  
for the Fourth Circuit**

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**MARYLAND SHALL ISSUE, *et al.*,**  
Plaintiffs-Appellants

v.

**LAWRENCE HOGAN, *et al.*,**  
Defendants-Appellees

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On Appeal from the United States District Court  
for the District of Maryland  
No. 1:16-cv-03311-ELH (Hon. Ellen L. Hollander)

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**JOINT APPENDIX VOLUME I  
JA0001-JA0479**

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[APPEAL,CASREF,CLOSED](#)

**U.S. District Court  
District of Maryland (Baltimore)  
CIVIL DOCKET FOR CASE #: 1:16-cv-03311-ELH**

Maryland Shall Issue, Inc. et al v. Hogan et al  
Assigned to: District Judge Ellen Lipton Hollander  
Referred to: Magistrate Judge J. Mark Coulson  
Case in other court: Fourth Circuit Court of Appeals, 19-01469  
US District Court of Appeals for the 4th  
Circuit, 21-02017  
USCA, 21-02053

Date Filed: 09/30/2016  
Date Terminated: 03/31/2019  
Jury Demand: None  
Nature of Suit: 440 Civil Rights: Other  
Jurisdiction: Federal Question

Cause: 42:1983 Civil Rights Act - Civil Action for Deprivation of Rights

**Plaintiff**

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*for itself and its members*

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District of Maryland (CM/ECF Live NextGen 1.6)

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Date Filed	#	Docket Text
09/30/2016	<a href="#"><u>1</u></a>	COMPLAINT against All Defendants ( Filing fee \$ 400 receipt number 0416-6268243.),

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		filed by Inc. Maryland Shall Issue, Inc Atlantic Guns, Deborah K Miller, Christine Bunch, Susan Brancato Vizas, Ana Sliveira.(Hansel, Cary) (Entered: 09/30/2016)
10/03/2016	<a href="#">2</a>	QC NOTICE: <a href="#">1</a> Complaint filed by Susan Brancato Vizas, Deborah Kay Miller, Christine Bunch, Ana Sliveira, Atlantic Guns, Inc., Maryland Shall Issue, Inc. was filed incorrectly. <i>**The following attachments or exhibits are missing - Civil Cover Sheet and Summons. To correct this problem, file Civil Cover Sheet and Summons using the event Notice (Other) and link Civil Cover Sheet and Summons to <a href="#">1</a> Complaint.</i> (bmhs, Deputy Clerk) (Entered: 10/03/2016)
10/03/2016	<a href="#">3</a>	NOTICE by Atlantic Guns, Inc., Susan Brancato Vizas, Christine Bunch, Maryland Shall Issue, Inc., Deborah Kay Miller, Ana Sliveira re <a href="#">1</a> Complaint <i>Civil Cover Sheet and Summons</i> (Hansel, Cary) (Entered: 10/03/2016)
10/03/2016	<a href="#">4</a>	Summons Issued 21 days as to Lawrence Hogan, William M. Pallozzi. (bmhs, Deputy Clerk) (Entered: 10/03/2016)
11/14/2016	<a href="#">5</a>	NOTICE of Appearance by Jennifer L. Katz on behalf of All Defendants (Katz, Jennifer) (Entered: 11/14/2016)
11/14/2016	<a href="#">6</a>	MOTION for Extension of Time by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 11/14/2016)
11/16/2016	<a href="#">7</a>	ORDER granting <a href="#">6</a> Defendants' Motion for Extension of Time. Signed by Judge Marvin J. Garbis on 11/15/2016. (bmhs, Deputy Clerk) (Entered: 11/16/2016)
12/02/2016	<a href="#">8</a>	MOTION to Dismiss for Failure to State a Claim by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Supplement memorandum of law, # <a href="#">2</a> Exhibit 2, # <a href="#">3</a> Exhibit 3, # <a href="#">4</a> Exhibit 4, # <a href="#">5</a> Exhibit 5, # <a href="#">6</a> Exhibit 6, # <a href="#">7</a> Exhibit 7, # <a href="#">8</a> Exhibit 8, # <a href="#">9</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 12/02/2016)
12/06/2016	<a href="#">9</a>	NOTICE of Appearance by Matthew John Fader on behalf of All Defendants (Fader, Matthew) (Entered: 12/06/2016)
12/14/2016	<a href="#">10</a>	Consent MOTION for Extension of Time to File Response/Reply as to <a href="#">8</a> MOTION to Dismiss for Failure to State a Claim by Maryland Shall Issue, Inc..(Hansel, Cary) (Entered: 12/14/2016)
12/15/2016	<a href="#">11</a>	Corrected Correspondence Correcting Earlier Submission: <a href="#">10</a> Motion for Extension of Time to File Response/Reply <i>Corrected Order- Consent Motion for Extension of Time</i> (Hansel, Cary) (Entered: 12/15/2016)
12/15/2016	<a href="#">12</a>	ORDER granting <a href="#">10</a> Motion for Extension of Time to File a Response to the Defendants' Motion to Dismiss. Signed by Judge Marvin J. Garbis on 12/15/2016 (cags, Deputy Clerk) (Entered: 12/15/2016)
12/28/2016	<a href="#">13</a>	AMENDED COMPLAINT against All Defendants, filed by Maryland Shall Issue, Inc.. (Hansel, Cary) (Entered: 12/28/2016)
12/28/2016	<a href="#">14</a>	AMENDED COMPLAINT against All Defendants, filed by Maryland Shall Issue, Inc.. (Attachments: # <a href="#">1</a> Redline)(Hansel, Cary) (Entered: 12/28/2016)
01/03/2017	<a href="#">15</a>	RESPONSE in Opposition re <a href="#">8</a> MOTION to Dismiss for Failure to State a Claim filed by Maryland Shall Issue, Inc..(Hansel, Cary) (Entered: 01/03/2017)
01/04/2017	<a href="#">16</a>	MOTION for Extension of Time by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 01/04/2017)
01/05/2017	<a href="#">17</a>	ORDER granting <a href="#">16</a> Defendants Motion for Extension of Time. Signed by Judge Marvin J. Garbis on 1/4/2017. (bmhs, Deputy Clerk) (Entered: 01/05/2017)



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01/20/2017	<a href="#">18</a>	MOTION to Dismiss for Failure to State a Claim by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Supplement memorandum of law, # <a href="#">2</a> Exhibit 2, # <a href="#">3</a> Exhibit 3, # <a href="#">4</a> Exhibit 4, # <a href="#">5</a> Exhibit 5, # <a href="#">6</a> Exhibit 6, # <a href="#">7</a> Exhibit 7, # <a href="#">8</a> Exhibit 8, # <a href="#">9</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 01/20/2017)
02/03/2017	<a href="#">19</a>	MOTION for Extension of Time by Maryland Shall Issue, Inc.(Hansel, Cary) (Entered: 02/03/2017)
02/06/2017	<a href="#">20</a>	ORDER granting <a href="#">19</a> Plaintiffs' Motion for Extension of Time. Signed by Judge Marvin J. Garbis on 2/3/2017. (bmhs, Deputy Clerk) (Entered: 02/06/2017)
02/22/2017	<a href="#">21</a>	NOTICE of Appearance by Marc A Nardone on behalf of Atlantic Guns, Inc. (Nardone, Marc) (Entered: 02/22/2017)
02/22/2017	<a href="#">22</a>	NOTICE of Appearance by Tara Sky Woodward on behalf of Atlantic Guns, Inc. (Woodward, Tara) (Entered: 02/22/2017)
02/22/2017	<a href="#">23</a>	NOTICE of Appearance by John Parker Sweeney on behalf of Atlantic Guns, Inc. (Sweeney, John) (Entered: 02/22/2017)
02/23/2017	<a href="#">24</a>	NOTICE of Appearance by James Wallace Porter, III on behalf of Atlantic Guns, Inc. (Porter, James) (Entered: 02/23/2017)
02/27/2017	<a href="#">25</a>	(FILED IN ERROR) Memorandum re <a href="#">18</a> MOTION to Dismiss for Failure to State a Claim filed by Maryland Shall Issue, Inc..(Hansel, Cary) Modified on 2/28/2017 (bmhs, Deputy Clerk). (Entered: 02/27/2017)
02/27/2017	<a href="#">26</a>	ORDER denying as moot <a href="#">8</a> Defendants' Motion to Dismiss. Signed by Judge Marvin J. Garbis on 2/27/2017. (bmhs, Deputy Clerk) (Entered: 02/28/2017)
02/28/2017	27	(FILED IN ERROR) QC NOTICE: <a href="#">25</a> Memorandum filed by Maryland Shall Issue, Inc. was filed incorrectly. <i>**Incorrect event selected. Please refile using the event under Responses and Replies -&gt; Reply to Response to Motion. It has been noted as FILED IN ERROR, and the document link has been disabled.</i> (bmhs, Deputy Clerk) Modified on 2/28/2017 (bmhs, Deputy Clerk). (Entered: 02/28/2017)
02/28/2017	28	CORRECTED QC NOTICE: <a href="#">25</a> Memorandum filed by Maryland Shall Issue, Inc. was filed incorrectly. <i>**Incorrect event selected. Please refile using the event under Responses and Replies -&gt; Response in Opposition to Motion. It has been noted as FILED IN ERROR, and the document link has been disabled.</i> (bmhs, Deputy Clerk) (Entered: 02/28/2017)
02/28/2017	<a href="#">29</a>	RESPONSE in Opposition re <a href="#">18</a> MOTION to Dismiss for Failure to State a Claim <i>Memorandum in Opposition to Motion to Dismiss</i> filed by Maryland Shall Issue, Inc.. (Hansel, Cary) (Entered: 02/28/2017)
03/06/2017	<a href="#">30</a>	MOTION for Extension of Time to File Response/Reply by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 03/06/2017)
03/06/2017	<a href="#">31</a>	ORDER granting <a href="#">30</a> Motion for Extension of Time. Signed by Judge Marvin J. Garbis on 3/6/2017. (bmhs, Deputy Clerk) (Entered: 03/06/2017)
03/20/2017	<a href="#">32</a>	REPLY to Response to Motion re <a href="#">18</a> MOTION to Dismiss for Failure to State a Claim filed by Lawrence Hogan, William M. Pallozzi.(Katz, Jennifer) (Entered: 03/20/2017)
08/07/2017	<a href="#">33</a>	Motion Hearing held on 8/7/2017 re <a href="#">18</a> MOTION to Dismiss for Failure to State a Claim filed by Lawrence Hogan, William M. Pallozzi before Judge Marvin J. Garbis.(Court Reporter: M. Giordano) (pat, Deputy Clerk) (Entered: 08/07/2017)

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09/06/2017	<a href="#">34</a>	MEMORANDUM AND ORDER granting in part and denying in part <a href="#">18</a> Defendants' Motion to Dismiss the Amended Complaint. Signed by Judge Marvin J. Garbis on 9/5/2017. (bmhs, Deputy Clerk) (Entered: 09/06/2017)
09/20/2017	<a href="#">35</a>	ANSWER to <a href="#">14</a> Amended Complaint by Lawrence Hogan, William M. Pallozzi.(Katz, Jennifer) (Entered: 09/20/2017)
09/25/2017		Telephone Conference held on 9/25/2017 before Judge Marvin J. Garbis. (bmhs, Deputy Clerk) (Entered: 09/25/2017)
09/25/2017	<a href="#">36</a>	SCHEDULING ORDER. Signed by Judge Marvin J. Garbis on 9/25/2017. (bmhs, Deputy Clerk) (Entered: 09/25/2017)
09/27/2017	<a href="#">37</a>	Status Report Submitted by Atlantic Guns, Inc. (Sweeney, John) (Entered: 09/27/2017)
10/10/2017	<a href="#">38</a>	NOTICE to Substitute Attorney <i>Robert A. Scott for Matthew J. Fader</i> (Attachments: # <a href="#">1</a> Text of Proposed Order)(Scott, Robert) (Entered: 10/10/2017)
10/11/2017	<a href="#">39</a>	ORDER granting <a href="#">38</a> motion for leave to withdraw appearance of Matthew J. Fader as counsel for Defendants. Signed by Judge Marvin J. Garbis on 10/11/2017. (dass, Deputy Clerk) (Entered: 10/11/2017)
12/22/2017	<a href="#">40</a>	Consent MOTION for Protective Order by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order Stipulated Confidentiality Order)(Scott, Robert) (Entered: 12/22/2017)
01/04/2018	<a href="#">41</a>	STIPULATED CONFIDENTIALITY ORDER. Signed by Judge Marvin J. Garbis on 1/3/2018. (bmhs, Deputy Clerk) (Entered: 01/05/2018)
02/09/2018	<a href="#">42</a>	MOTION for Sanctions by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Exhibit 1, # <a href="#">2</a> Exhibit 2, # <a href="#">3</a> Exhibit 3, # <a href="#">4</a> Exhibit 4, # <a href="#">5</a> Exhibit 5, # <a href="#">6</a> Exhibit 6, # <a href="#">7</a> Text of Proposed Order, # <a href="#">8</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 02/09/2018)
02/12/2018	<a href="#">43</a>	ORDER REFERRING CASE to Magistrate Judge J. Mark Coulson for all Discovery and Related Scheduling. Signed by Judge Marvin J. Garbis on 2/12/2018. (cags, Deputy Clerk) (Entered: 02/12/2018)
02/20/2018	<a href="#">44</a>	NOTICE by Atlantic Guns, Inc., Susan Brancato Vizas, Christine Bunch, Maryland Shall Issue, Inc., Deborah Kay Miller, Ana Sliveira <i>Joint Line</i> (Hansel, Cary) (Entered: 02/20/2018)
02/20/2018	<a href="#">45</a>	ORDER denying as moot Defendant's Motion to Dismiss, or, in the Alternative, for Summary Judgment. Signed by Judge Marvin J. Garbis on 2/20/2018. (bmhs, Deputy Clerk) (Entered: 02/21/2018)
02/28/2018	<a href="#">46</a>	PAPERLESS ORDER: Pursuant to the dismissal of claims with prejudice by Plaintiffs Ana Sliveira and Christine Bunch, (ECF No. 44), Defendants' Motion for Sanctions for Failure to Respond to Discovery, (ECF No. 42), is denied as moot. Signed by Magistrate Judge J. Mark Coulson on 2/28/2018. (daws, Chambers) (Entered: 02/28/2018)
03/07/2018	<a href="#">47</a>	(FILED IN ERROR) AFFIDAVIT of Service - <i>Dana Hoffman</i> by Lawrence Hogan, William M. Pallozzi(Scott, Robert) Modified on 3/7/2018 (bmhs, Deputy Clerk). (Entered: 03/07/2018)
03/07/2018	<a href="#">48</a>	(FILED IN ERROR) AFFIDAVIT of Service - <i>John Matthew Clark</i> by Lawrence Hogan, William M. Pallozzi(Scott, Robert) Modified on 3/7/2018 (bmhs, Deputy Clerk). (Entered: 03/07/2018)
03/07/2018	<a href="#">49</a>	(FILED IN ERROR) AFFIDAVIT of Service - <i>Scott Miller</i> by Lawrence Hogan, William M. Pallozzi(Scott, Robert) Modified on 3/7/2018 (bmhs, Deputy Clerk). (Entered: 03/07/2018)

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		03/07/2018)
03/07/2018	50	QC NOTICE: <a href="#">47</a> Affidavit, <a href="#">48</a> Affidavit, <a href="#">49</a> Affidavit filed by Lawrence Hogan, William M. Pallozzi was filed incorrectly. <i>**Discovery material is not filed with the Court pursuant to Local Rule 104. It has been noted as FILED IN ERROR, and the document link has been disabled.</i> (bmhs, Deputy Clerk) (Entered: 03/07/2018)
03/22/2018	<a href="#">51</a>	Consent MOTION for Extension of Time to Complete Discovery by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Scott, Robert) (Entered: 03/22/2018)
03/22/2018	<a href="#">52</a>	ORDER granting <a href="#">51</a> Consent Motion for Extension of Time to Complete Discovery. Signed by Judge Marvin J. Garbis on 3/22/2018. (bmhs, Deputy Clerk) (Entered: 03/23/2018)
04/13/2018	<a href="#">53</a>	Local Rule 104.7 and 104.8 (Attachments: # <a href="#">1</a> Exhibit A - 2018.01.30 Motion to Compel Defendant Pallozzi, # <a href="#">2</a> Exhibit B - 2018.03.20 Pallozzi's Opposition to A.Guns Motion to Compel, # <a href="#">3</a> Exhibit C - Atlantic Guns Reply in Support of Motion to Compel, # <a href="#">4</a> Exhibit D - Atlantic Guns Supplemental Reply in Support of Motion to Compel) (Sweeney, John) (Entered: 04/13/2018)
04/20/2018	<a href="#">54</a>	ORDER granting <a href="#">53</a> Plaintiff's Motion to Compel/Local Rule 104.7 and 104.8. Signed by Magistrate Judge J. Mark Coulson on 4/20/2018. (bmhs, Deputy Clerk) (Entered: 04/20/2018)
04/30/2018	<a href="#">55</a>	Consent MOTION for Extension of Time <i>for Defendants to Make Expert Disclosures</i> by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Scott, Robert) (Entered: 04/30/2018)
05/02/2018	<a href="#">56</a>	ORDER granting <a href="#">55</a> Consent Motion for Extension of Time for Defendants to Make Expert Disclosures. Signed by Judge Marvin J. Garbis on 5/1/2018. (bmhs, Deputy Clerk) (Entered: 05/02/2018)
06/26/2018	<a href="#">57</a>	Consent MOTION for Extension of Time <i>to File Summary Judgment Motions</i> by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Scott, Robert) (Entered: 06/26/2018)
06/27/2018	<a href="#">58</a>	ORDER granting <a href="#">57</a> Motion for Extension of Time. Signed by Chief Judge James K. Bredar on 6/27/2018. (bmhs, Deputy Clerk) (Entered: 06/27/2018)
07/26/2018		Case reassigned to Judge Ellen L. Hollander. Judge Marvin J. Garbis no longer assigned to the case. (cags, Deputy Clerk) (Entered: 07/26/2018)
08/17/2018	<a href="#">59</a>	MOTION for Summary Judgment by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Memorandum in Support, # <a href="#">2</a> Exhibit 2, # <a href="#">3</a> Exhibit 3, # <a href="#">4</a> Exhibit 4, # <a href="#">5</a> Exhibit 5, # <a href="#">6</a> Exhibit 6, # <a href="#">7</a> Exhibit 7, # <a href="#">8</a> Exhibit 8, # <a href="#">9</a> Exhibit 9, # <a href="#">10</a> Exhibit 10, # <a href="#">11</a> Exhibit 11, # <a href="#">12</a> Exhibit 12, # <a href="#">13</a> Exhibit 13, # <a href="#">14</a> Exhibit 14, # <a href="#">15</a> Exhibit 15, # <a href="#">16</a> Exhibit 16, # <a href="#">17</a> Exhibit 17, # <a href="#">18</a> Exhibit 18, # <a href="#">19</a> Exhibit 19, # <a href="#">20</a> Exhibit 20, # <a href="#">21</a> Exhibit 21, # <a href="#">22</a> Exhibit 22, # <a href="#">23</a> Exhibit 23, # <a href="#">24</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 08/17/2018)
08/21/2018	<a href="#">60</a>	MOTION to Appear Pro Hac Vice for Brian A. Rosenthal (Filing fee \$100, receipt number 0416-7516653.) by Everytown for Gun Safety(Davis, Thad) (Entered: 08/21/2018)
08/21/2018	<a href="#">61</a>	MOTION to Appear Pro Hac Vice for Kimberly L. Friedman (Filing fee \$100, receipt number 0416-7516661.) by Everytown for Gun Safety(Davis, Thad) (Entered: 08/21/2018)

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08/21/2018	<a href="#">62</a>	MOTION to Appear Pro Hac Vice for Laura F. Corbin (Filing fee \$100, receipt number 0416-7516663.) by Everytown for Gun Safety(Davis, Thad) (Entered: 08/21/2018)
08/21/2018	<a href="#">63</a>	MOTION to Appear Pro Hac Vice for Andrea H. Hadjiyianni (Filing fee \$100, receipt number 0416-7516664.) by Everytown for Gun Safety(Davis, Thad) (Entered: 08/21/2018)
08/24/2018	64	PAPERLESS ORDER granting <a href="#">60</a> Motion to Appear Pro Hac Vice on behalf of Brian A Rosenthal. Attorney Brian A Rosenthal will receive a separate email with the previously issued CM/ECF login and password. Signed by Clerk on 8/24/2018. (srds, Deputy Clerk) (Entered: 08/24/2018)
08/24/2018	65	PAPERLESS ORDER granting <a href="#">61</a> Motion to Appear Pro Hac Vice on behalf of Kimberly Friedman. Directing attorney Kimberly Friedman to register online for CM/ECF at <a href="http://www.mdd.uscourts.gov/electronic-case-filing-registration">http://www.mdd.uscourts.gov/electronic-case-filing-registration</a> . Signed by Clerk on 8/24/2018. (srds, Deputy Clerk) (Entered: 08/24/2018)
08/24/2018	66	PAPERLESS ORDER granting <a href="#">62</a> Motion to Appear Pro Hac Vice on behalf of Laura Corbin. Directing attorney Laura Corbin to register online for CM/ECF at <a href="http://www.mdd.uscourts.gov/electronic-case-filing-registration">http://www.mdd.uscourts.gov/electronic-case-filing-registration</a> . Signed by Clerk on 8/24/2018. (srds, Deputy Clerk) (Entered: 08/24/2018)
08/24/2018	67	PAPERLESS ORDER granting <a href="#">63</a> Motion to Appear Pro Hac Vice on behalf of Andrea Hadjiyianni. Directing attorney Andrea Hadjiyianni to register online for CM/ECF at <a href="http://www.mdd.uscourts.gov/electronic-case-filing-registration">http://www.mdd.uscourts.gov/electronic-case-filing-registration</a> . Signed by Clerk on 8/24/2018. (srds, Deputy Clerk) (Entered: 08/24/2018)
08/24/2018	<a href="#">68</a>	MOTION for Leave to File <i>Amicus Curiae Brief</i> by Everytown for Gun Safety (Attachments: # <a href="#">1</a> Exhibit 1 - Brief of Amicus Curiae Everytown for Gun Safety in Support of Defendants' Motion for Summary Judgment, # <a href="#">2</a> Exhibit 2 - Appendix of Historical Authority, # <a href="#">3</a> Text of Proposed Order Granting Motion for Leave to File Amicus Curiae Brief)(Davis, Thad) (Entered: 08/24/2018)
08/27/2018	<a href="#">69</a>	ORDER granting <a href="#">68</a> Everytown for Gun Safety's Consent Motion for Leave to File Amicus Curiae Brief. Signed by Judge Ellen L. Hollander on 8/27/2018. (bmhs, Deputy Clerk) (Entered: 08/28/2018)
08/27/2018	<a href="#">70</a>	Brief of Amicus Curiae by Everytown for Gun Safety in Support of <a href="#">59</a> Defendants' MOTION for Summary Judgment. (Attachments: # <a href="#">1</a> Appendix)(bmhs, Deputy Clerk) (Entered: 08/28/2018)
09/18/2018	<a href="#">71</a>	Consent MOTION for Extension of Time to File <i>Summary Judgment Motions</i> by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller (Attachments: # <a href="#">1</a> Text of Proposed Order)(Sweeney, John) (Entered: 09/18/2018)
09/18/2018	<a href="#">72</a>	ORDER granting <a href="#">71</a> Consent Motion for Extension of Time. Signed by Judge Ellen L. Hollander on 9/18/2018. (bmhs, Deputy Clerk) (Entered: 09/19/2018)
10/01/2018	<a href="#">73</a>	MOTION to Appear Pro Hac Vice for Joseph Greenlee <i>on behalf of Millenial Policy Center by Gregory M. Kline, Esq.</i> (Filing fee \$100, receipt number 0416-7591345.) by Millenial Policy Center(Kline, Gregory) (Entered: 10/01/2018)
10/02/2018	74	PAPERLESS ORDER granting <a href="#">73</a> Motion to Appear Pro Hac Vice on behalf of Joseph Greenlee. Directing attorney Joseph Greenlee to register online for CM/ECF at <a href="http://www.mdd.uscourts.gov/electronic-case-filing-registration">http://www.mdd.uscourts.gov/electronic-case-filing-registration</a> . Signed by Clerk on 10/2/2018. (srd, Deputy Clerk) (Entered: 10/02/2018)
10/05/2018	<a href="#">75</a>	Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment</i> by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue,



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		Inc., Deborah Kay Miller (Attachments: # <a href="#">1</a> Text of Proposed Order)(Sweeney, John) (Entered: 10/05/2018)
10/05/2018	<a href="#">76</a>	Consent MOTION for Leave to File <i>Amicus Curiae Brief in opposition to Defendants' Motion for Summary Judgment and in Support of Plaintiffs' Cross-Motion for Summary Judgment</i> by Millenial Policy Center (Attachments: # <a href="#">1</a> Text of Proposed Order)(Kline, Gregory) (Entered: 10/05/2018)
10/05/2018	<a href="#">77</a>	Memorandum re <a href="#">75</a> Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment</i> filed by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller. (Attachments: # <a href="#">1</a> Exhibit 1, # <a href="#">2</a> Exhibit 2, # <a href="#">3</a> Exhibit 3, # <a href="#">4</a> Exhibit 4, # <a href="#">5</a> Exhibit 5, # <a href="#">6</a> Exhibit 6, # <a href="#">7</a> Exhibit 7, # <a href="#">8</a> Exhibit 8, # <a href="#">9</a> Exhibit 9, # <a href="#">10</a> Exhibit 10, # <a href="#">11</a> Exhibit 11, # <a href="#">12</a> Exhibit 12, # <a href="#">13</a> Exhibit 13, # <a href="#">14</a> Exhibit 14, # <a href="#">15</a> Exhibit 15, # <a href="#">16</a> Exhibit 16, # <a href="#">17</a> Exhibit 17, # <a href="#">18</a> Exhibit 18, # <a href="#">19</a> Exhibit 19, # <a href="#">20</a> Exhibit 20, # <a href="#">21</a> Exhibit 21, # <a href="#">22</a> Exhibit 22, # <a href="#">23</a> Exhibit 23, # <a href="#">24</a> Exhibit 24, # <a href="#">25</a> Exhibit 25, # <a href="#">26</a> Exhibit 26, # <a href="#">27</a> Exhibit 27)(Sweeney, John) (Entered: 10/05/2018)
10/05/2018	<a href="#">78</a>	Memorandum re <a href="#">59</a> MOTION for Summary Judgment , <a href="#">75</a> Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment Amicus Curiae Brief in opposition to Defendants' Motion for Summary Judgment and in Support of Plaintiffs' Cross-Motion for Summary Judgment</i> filed by Millenial Policy Center.(Kline, Gregory) (Entered: 10/05/2018)
10/05/2018	<a href="#">79</a>	MOTION to Strike <i>Opinions of Defendants' Experts James Johnson, James Russell, and Daniel Webster</i> by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller (Attachments: # <a href="#">1</a> Text of Proposed Order, # <a href="#">2</a> Exhibit 1, # <a href="#">3</a> Exhibit 2, # <a href="#">4</a> Exhibit 3, # <a href="#">5</a> Exhibit 4)(Sweeney, John) (Entered: 10/05/2018)
10/05/2018	<a href="#">80</a>	Consent MOTION to Seal <i>Declaration of Stephen Schneider and its Exhibits A and B</i> by Atlantic Guns, Inc. (Attachments: # <a href="#">1</a> Text of Proposed Order)(Sweeney, John) (Entered: 10/05/2018)
10/09/2018	<a href="#">81</a>	ORDER granting <a href="#">76</a> Consent Motion for Leave to File an Amicus Curiae Brief. Signed by Judge Ellen L. Hollander on 10/9/2018. (bmhs, Deputy Clerk) (Entered: 10/09/2018)
10/16/2018	<a href="#">82</a>	Consent MOTION for Extension of Time by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 10/16/2018)
10/16/2018	<a href="#">83</a>	ORDER granting <a href="#">82</a> Consent MOTION for Extension of Time. Signed by Judge Ellen L. Hollander on 10/16/2018. (kw2s, Deputy Clerk) (Entered: 10/16/2018)
10/17/2018	<a href="#">84</a>	-SEALED- Declaration of Stephen Schneider. (Attachments: # <a href="#">1</a> Exhibit A, # <a href="#">2</a> Exhibit B)(bmhs, Deputy Clerk) (Entered: 10/17/2018)
10/17/2018	<a href="#">85</a>	ORDER granting <a href="#">80</a> Consent Motion to Seal Declaration of Stephen Schneider and its Exhibits A and B, subject to the terms stated here. Signed by Judge Ellen L. Hollander on 10/17/2018. (bmhs, Deputy Clerk) (Entered: 10/17/2018)
10/25/2018	<a href="#">86</a>	REDACTED DOCUMENT to <a href="#">75</a> Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment</i> , <a href="#">77</a> Memorandum,,, by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller(Sweeney, John) (Entered: 10/25/2018)
11/09/2018	<a href="#">87</a>	Consent MOTION for Extension of Time to File Response/Reply by Lawrence Hogan (Attachments: # <a href="#">1</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 11/09/2018)
11/09/2018	<a href="#">88</a>	ORDER granting <a href="#">87</a> Consent Motion for Extension of Time to File Response/Reply re: Defendants' opposition/reply in the summary judgment briefing, and Plaintiffs' reply in

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		the summary judgment briefing. Signed by Judge Ellen L. Hollander on 11/9/2018. (dass, Deputy Clerk) (Entered: 11/09/2018)
11/09/2018		Set/Reset Deadlines as to <a href="#">75</a> Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment</i> . Responses due by 11/16/2018 Replies due by 12/7/2018. (dass, Deputy Clerk) (Entered: 11/09/2018)
11/09/2018		Set/Reset Deadlines as to <a href="#">79</a> MOTION to Strike <i>Opinions of Defendants' Experts James Johnson, James Russell, and Daniel Webster</i> . Responses due by 11/16/2018 (dass, Deputy Clerk) (Entered: 11/09/2018)
11/16/2018	<a href="#">89</a>	REPLY to Response to Motion re <a href="#">59</a> MOTION for Summary Judgment , RESPONSE in Opposition re <a href="#">75</a> Cross-Motion for Summary Judgment filed by Lawrence Hogan, William M. Pallozzi. (Attachments: # <a href="#">1</a> Exhibit 24, # <a href="#">2</a> Exhibit 25, # <a href="#">3</a> Exhibit 26, # <a href="#">4</a> Exhibit 27, # <a href="#">5</a> Exhibit 28, # <a href="#">6</a> Exhibit 29, # <a href="#">7</a> Exhibit 30, # <a href="#">8</a> Exhibit 31, # <a href="#">9</a> Exhibit 32, # <a href="#">10</a> Exhibit 33, # <a href="#">11</a> Exhibit 34, # <a href="#">12</a> Exhibit 35, # <a href="#">13</a> Exhibit 36, # <a href="#">14</a> Exhibit 37, # <a href="#">15</a> Exhibit 38, # <a href="#">16</a> Exhibit 39)(Katz, Jennifer) (Entered: 11/16/2018)
11/16/2018	<a href="#">90</a>	RESPONSE in Opposition re <a href="#">79</a> MOTION to Strike <i>Opinions of Defendants' Experts James Johnson, James Russell, and Daniel Webster</i> filed by Lawrence Hogan, William M. Pallozzi. (Attachments: # <a href="#">1</a> Exhibit 1)(Katz, Jennifer) (Entered: 11/16/2018)
11/16/2018	<a href="#">91</a>	MOTION to Strike by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Memorandum in Support, # <a href="#">2</a> Exhibit 1, # <a href="#">3</a> Exhibit 2, # <a href="#">4</a> Exhibit 3, # <a href="#">5</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 11/16/2018)
11/21/2018	<a href="#">92</a>	Consent MOTION for Extension of Time by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller (Attachments: # <a href="#">1</a> Text of Proposed Order)(Sweeney, John) (Entered: 11/21/2018)
11/21/2018	<a href="#">93</a>	ORDER granting <a href="#">92</a> Plaintiffs' Consent Motion for Extension of Time. Signed by Judge Ellen L. Hollander on 11/21/2018. (bmhs, Deputy Clerk) (Entered: 11/21/2018)
12/07/2018	<a href="#">94</a>	RESPONSE in Opposition re <a href="#">91</a> MOTION to Strike <i>Opinions of Lay Witness Mark Pennak and Experts Carlisle Moody and Gary Kleck</i> filed by Atlantic Guns, Inc., Susan Brancato Vizas, Christine Bunch, Maryland Shall Issue, Inc., Deborah Kay Miller, Ana Sliveira. (Attachments: # <a href="#">1</a> Exhibit Ex. 1, # <a href="#">2</a> Exhibit Ex. 2, # <a href="#">3</a> Exhibit Ex. 3, # <a href="#">4</a> Exhibit Ex. 4)(Sweeney, John) (Entered: 12/07/2018)
12/07/2018	<a href="#">95</a>	RESPONSE in Support re <a href="#">79</a> MOTION to Strike <i>Opinions of Defendants' Experts James Johnson, James Russell, and Daniel Webster</i> filed by Atlantic Guns, Inc., Susan Brancato Vizas, Christine Bunch, Maryland Shall Issue, Inc., Deborah Kay Miller, Ana Sliveira. (Sweeney, John) (Entered: 12/07/2018)
12/07/2018	<a href="#">96</a>	RESPONSE in Support re <a href="#">75</a> Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment</i> filed by Atlantic Guns, Inc., Susan Brancato Vizas, Christine Bunch, Maryland Shall Issue, Inc., Deborah Kay Miller, Ana Sliveira. (Attachments: # <a href="#">1</a> Exhibit Ex. 1, # <a href="#">2</a> Exhibit Ex. 2)(Sweeney, John) (Entered: 12/07/2018)
12/21/2018	<a href="#">97</a>	REPLY to Response to Motion re <a href="#">91</a> MOTION to Strike filed by Lawrence Hogan, William M. Pallozzi. (Attachments: # <a href="#">1</a> Exhibit 4)(Katz, Jennifer) (Entered: 12/21/2018)
03/31/2019	<a href="#">98</a>	-SEALED- MEMORANDUM OPINION. Signed by Judge Ellen L. Hollander on 3/31/2019. (c/em 4/1/19 bmhs, Deputy Clerk) (Entered: 04/01/2019)
03/31/2019	<a href="#">99</a>	ORDER granting <a href="#">59</a> Defendants' Motion for Summary Judgment; denying <a href="#">75</a> Plaintiffs' Motion for Summary Judgment; denying as moot <a href="#">79</a> <a href="#">91</a> the parties Motions to Exclude Expert Witnesses; and directing parties to advise the Court as to whether they object to

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		the lifting of the seal as that the Court may publicly issue this Memorandum Opinion. Signed by Judge Ellen L. Hollander on 3/31/2019. (bmhs, Deputy Clerk) (Entered: 04/01/2019)
04/04/2019	<a href="#">100</a>	MOTION to File a Redacted Version of the Memorandum Opinion by Atlantic Guns, Inc. (Attachments: # <a href="#">1</a> Exhibit A, # <a href="#">2</a> Text of Proposed Order)(Sweeney, John) (Entered: 04/04/2019)
04/04/2019	<a href="#">101</a>	ORDER granting in part <a href="#">100</a> MOTION to File a Redacted Version of the Memorandum Opinion. Signed by Judge Ellen L. Hollander on 4/4/2019. (kw2s, Deputy Clerk) (Entered: 04/05/2019)
04/04/2019	<a href="#">102</a>	REDACTED MEMORANDUM OPINION. Signed by Judge Ellen L. Hollander on 3/31/2019. (kw2s, Deputy Clerk) (Entered: 04/05/2019)
04/25/2019	<a href="#">103</a>	NOTICE OF APPEAL as to <a href="#">99</a> Order on Motion for Summary Judgment,,,, Order on Motion to Strike,,, by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller. Filing fee \$ 505, receipt number 0416-7975311.(Sutherell, Erienne) (Entered: 04/25/2019)
04/26/2019	<a href="#">104</a>	Transmission of Notice of Appeal and Docket Sheet to US Court of Appeals re <a href="#">103</a> Notice of Appeal,. IMPORTANT NOTICE: To access forms which you are required to file with the United States Court of Appeals for the Fourth Circuit please go to <a href="http://www.ca4.uscourts.gov">http://www.ca4.uscourts.gov</a> and click on Forms & Notices.(ko, Deputy Clerk) (Entered: 04/26/2019)
05/01/2019	<a href="#">105</a>	USCA Case Number 19-1469 for <a href="#">103</a> Notice of Appeal, filed by Susan Brancato Vizas, Deborah Kay Miller, Atlantic Guns, Inc., Maryland Shall Issue, Inc. - Case Manager - Joy Hargett Moore (slss, Deputy Clerk) (Entered: 05/01/2019)
09/06/2019	<a href="#">106</a>	MOTION to Supplement the Record on Appeal by Atlantic Guns, Inc. (Attachments: # <a href="#">1</a> Text of Proposed Order, # <a href="#">2</a> Memorandum in Support, # <a href="#">3</a> Exhibit 1)(Sweeney, John) (Entered: 09/06/2019)
09/17/2019	<a href="#">107</a>	RESPONSE in Opposition re <a href="#">106</a> MOTION to Supplement the Record on Appeal filed by Lawrence Hogan, William M. Pallozzi.(Katz, Jennifer) (Entered: 09/17/2019)
09/18/2019	<a href="#">108</a>	REPLY to Response to Motion re <a href="#">106</a> MOTION to Supplement the Record on Appeal filed by Atlantic Guns, Inc..(Sweeney, John) (Entered: 09/18/2019)
10/11/2019	<a href="#">109</a>	MEMORANDUM. Signed by Judge Ellen L. Hollander on 10/11/2019. (bmhs, Deputy Clerk) (Entered: 10/11/2019)
10/11/2019	<a href="#">110</a>	ORDER denying <a href="#">106</a> Motion to Supplement the Record on Appeal. Signed by Judge Ellen L. Hollander on 10/11/2019. (bmhs, Deputy Clerk) (Entered: 10/11/2019)
08/03/2020	<a href="#">111</a>	JUDGMENT of USCA affirming in part and reversing in part. Remanding to the District Court for further proceedings as to <a href="#">103</a> Notice of Appeal, filed by Susan Brancato Vizas, Deborah Kay Miller, Atlantic Guns, Inc., Maryland Shall Issue, Inc. (Attachments: # <a href="#">1</a> USCA Opinion, # <a href="#">2</a> Notice of Judgment)(ko, Deputy Clerk) (Entered: 08/03/2020)
08/03/2020	<a href="#">112</a>	MOTION to Withdraw as Attorney by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Katz, Jennifer) (Entered: 08/03/2020)
08/04/2020	<a href="#">113</a>	ORDER granting <a href="#">112</a> Motion to Withdraw as Attorney. Attorney Jennifer L. Katz terminated. Signed by Judge Ellen L. Hollander on 8/3/2020. (bmhs, Deputy Clerk) (Entered: 08/04/2020)
08/17/2020	<a href="#">114</a>	MANDATE of USCA stayed as to <a href="#">103</a> Notice of Appeal, filed by Susan Brancato Vizas, Deborah Kay Miller, Atlantic Guns, Inc., Maryland Shall Issue, Inc. (ko, Deputy Clerk)



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		(Entered: 08/17/2020)
08/28/2020	115	PAPERLESS ORDER. A telephone conference has been scheduled for September 17, 2020, at 4:00 p.m. Counsel for plaintiffs is to initiate the call to defense counsel and then to chambers. Signed by Judge Ellen L. Hollander on 8/28/2020. (kw, Chambers) (Entered: 08/28/2020)
08/31/2020	<a href="#">116</a>	ORDER of USCA amending opinion as to <a href="#">103</a> Notice of Appeal, filed by Susan Brancato Vizas, Deborah Kay Miller, Atlantic Guns, Inc., Maryland Shall Issue, Inc. (Attachments: # <a href="#">1</a> Amended Opinion)(ko, Deputy Clerk) (Entered: 08/31/2020)
08/31/2020	<a href="#">117</a>	ORDER of USCA denying rehearing as to <a href="#">103</a> Notice of Appeal, filed by Susan Brancato Vizas, Deborah Kay Miller, Atlantic Guns, Inc., Maryland Shall Issue, Inc. (ko, Deputy Clerk) (Entered: 08/31/2020)
09/08/2020	<a href="#">118</a>	MANDATE of USCA as to <a href="#">103</a> Notice of Appeal, filed by Susan Brancato Vizas, Deborah Kay Miller, Atlantic Guns, Inc., Maryland Shall Issue, Inc. (jb5, Deputy Clerk) (Entered: 09/08/2020)
09/18/2020	119	PAPERLESS ORDER. Due to problems with the Court's telephone system, the telephone conference has been rescheduled to September 23, 2020, at 4:30 p.m. Counsel for plaintiffs is to initiate the call to defense counsel and then to Chambers. Signed by Judge Ellen L. Hollander on 9/18/2020. (kw, Chambers) (Entered: 09/18/2020)
09/23/2020		Telephone Status Conference held on 9/23/2020 before Judge Ellen L. Hollander. (bmhs, Deputy Clerk) (Entered: 09/24/2020)
10/01/2020	<a href="#">120</a>	Joint MOTION <i>to Set Time to File Summary Judgment Motions</i> by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller (Attachments: # <a href="#">1</a> Text of Proposed Order)(Sweeney, John) (Entered: 10/01/2020)
10/01/2020	<a href="#">121</a>	ORDER granting <a href="#">120</a> Joint Motion to Set Time to File Summary Judgment Motions. Signed by Judge Ellen L. Hollander on 10/1/2020. (bmhs, Deputy Clerk) (Entered: 10/02/2020)
11/05/2020	<a href="#">122</a>	Consent MOTION for Extension of Time <i>to file Summary Judgment</i> by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Scott, Robert) (Entered: 11/05/2020)
11/05/2020	<a href="#">123</a>	ORDER granting <a href="#">122</a> Consent Motion for Extension of Time. Signed by Judge Ellen L. Hollander on 11/5/2020. (bmhs, Deputy Clerk) (Entered: 11/05/2020)
11/24/2020	<a href="#">124</a>	NOTICE of Appearance by Ryan Robert Dietrich on behalf of All Defendants (Dietrich, Ryan) (Entered: 11/24/2020)
11/25/2020	<a href="#">125</a>	MOTION for Summary Judgment by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Memorandum in Support, # <a href="#">2</a> Exhibit, # <a href="#">3</a> Exhibit, # <a href="#">4</a> Exhibit, # <a href="#">5</a> Exhibit, # <a href="#">6</a> Exhibit, # <a href="#">7</a> Exhibit, # <a href="#">8</a> Exhibit, # <a href="#">9</a> Exhibit, # <a href="#">10</a> Exhibit, # <a href="#">11</a> Exhibit, # <a href="#">12</a> Exhibit, # <a href="#">13</a> Exhibit, # <a href="#">14</a> Exhibit, # <a href="#">15</a> Exhibit, # <a href="#">16</a> Exhibit, # <a href="#">17</a> Text of Proposed Order)(Dietrich, Ryan) (Entered: 11/25/2020)
12/02/2020	<a href="#">126</a>	MOTION to Appear Pro Hac Vice for Amina Mousa (Filing fee \$100, receipt number 0416-8992884.) by Everytown for Gun Safety(Davis, Thad) (Entered: 12/02/2020)
12/02/2020	<a href="#">127</a>	MOTION for Leave to File / <i>MOTION OF EVERYTOWN FOR GUN SAFETY FOR LEAVE TO FILE AMICUS CURIAE BRIEF IN SUPPORT OF DEFENDANTS' MOTION FOR SUMMARY JUDGMENT</i> by Everytown for Gun Safety (Attachments: # <a href="#">1</a> Exhibit A - Proposed Amicus Brief, # <a href="#">2</a> Exhibit B - Proposed Appendix Cover and Index, # <a href="#">3</a> Appendix Ex. 1 - Regulation excerpts, # <a href="#">4</a> Appendix Ex. 2 - Code, # <a href="#">5</a> Appendix Ex. 3 -

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		Session Laws, # <a href="#">6</a> Appendix Ex. 4 - Session Laws, # <a href="#">7</a> Appendix Ex. 5 - Laws, # <a href="#">8</a> Appendix Ex. 6 - Ordinances, # <a href="#">9</a> Appendix Ex. 7 - Laws, # <a href="#">10</a> Appendix Ex. 8 - Acts, # <a href="#">11</a> Appendix Ex. 9 - Code, # <a href="#">12</a> Appendix Ex. 10 - Case Law, # <a href="#">13</a> Appendix Ex. 11 - Acts, # <a href="#">14</a> Appendix Ex. 12 - Acts, # <a href="#">15</a> Appendix Ex. 13 - Session Laws, # <a href="#">16</a> Text of Proposed Order)(Davis, Thad) (Entered: 12/02/2020)
12/03/2020	<a href="#">128</a>	ORDER granting <a href="#">127</a> Everytown for Gun Safety's Motion for Leave to File an Amicus Curiae Brief in Support of Defendants' Motion for Summary Judgment. Signed by Judge Ellen L. Hollander on 12/3/2020. (bmhs, Deputy Clerk) (Entered: 12/03/2020)
12/03/2020	<a href="#">129</a>	Brief of Amicus Curiae Everytown for Gun Safety in Support of <a href="#">125</a> Defendants' Motion for Summary Judgment. (Attachments: # <a href="#">1</a> Appendix, # <a href="#">2</a> Exhibit 1, # <a href="#">3</a> Exhibit 2, # <a href="#">4</a> Exhibit 3, # <a href="#">5</a> Exhibit 4, # <a href="#">6</a> Exhibit 5, # <a href="#">7</a> Exhibit 6, # <a href="#">8</a> Exhibit 7, # <a href="#">9</a> Exhibit 8, # <a href="#">10</a> Exhibit 9, # <a href="#">11</a> Exhibit 10, # <a href="#">12</a> Exhibit 11, # <a href="#">13</a> Exhibit 12, # <a href="#">14</a> Exhibit 13)(bmhs, Deputy Clerk) (Entered: 12/03/2020)
12/09/2020	<a href="#">130</a>	PAPERLESS ORDER granting <a href="#">126</a> Motion to Appear Pro Hac Vice on behalf of Amina Mousa. Directing attorney Amina Mousa to register online for CM/ECF at <a href="http://www.mdd.uscourts.gov/electronic-case-filing-registration">http://www.mdd.uscourts.gov/electronic-case-filing-registration</a> . Signed by Clerk on 12/9/2020. (srd, Deputy Clerk) (Entered: 12/09/2020)
01/27/2021	<a href="#">131</a>	(FILED IN ERROR) Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment</i> by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller (Attachments: # <a href="#">1</a> Text of Proposed Order)(Sweeney, John) Modified on 1/28/2021 (bmhs, Deputy Clerk). (Entered: 01/27/2021)
01/27/2021	<a href="#">132</a>	Memorandum re <a href="#">131</a> Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment</i> filed by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller. (Attachments: # <a href="#">1</a> Exhibit 1, # <a href="#">2</a> Exhibit 2, # <a href="#">3</a> Exhibit 3, # <a href="#">4</a> Exhibit 4, # <a href="#">5</a> Exhibit 5, # <a href="#">6</a> Exhibit 6, # <a href="#">7</a> Exhibit 7, # <a href="#">8</a> Exhibit 8, # <a href="#">9</a> Exhibit 9, # <a href="#">10</a> Exhibit 10, # <a href="#">11</a> Exhibit 11, # <a href="#">12</a> Exhibit 12, # <a href="#">13</a> Exhibit 13, # <a href="#">14</a> Exhibit 14, # <a href="#">15</a> Exhibit 15, # <a href="#">16</a> Exhibit 16, # <a href="#">17</a> Exhibit 17, # <a href="#">18</a> Exhibit 18, # <a href="#">19</a> Exhibit 19, # <a href="#">20</a> Exhibit 20, # <a href="#">21</a> Exhibit 21, # <a href="#">22</a> Exhibit 22, # <a href="#">23</a> Exhibit 23, # <a href="#">24</a> Exhibit 24, # <a href="#">25</a> Exhibit 25, # <a href="#">26</a> Exhibit 26, # <a href="#">27</a> Exhibit 27, # <a href="#">28</a> Exhibit 28)(Sweeney, John) (Entered: 01/27/2021)
01/27/2021	<a href="#">133</a>	MOTION to Strike <i>Opinions of Defendants' Experts James Johnson, James Russell, and Daniel Webster</i> by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller (Attachments: # <a href="#">1</a> Text of Proposed Order, # <a href="#">2</a> Exhibit 1, # <a href="#">3</a> Exhibit 2, # <a href="#">4</a> Exhibit 3, # <a href="#">5</a> Exhibit 4)(Sweeney, John) (Entered: 01/27/2021)
01/28/2021	<a href="#">134</a>	QC NOTICE: <a href="#">131</a> Motion for Summary Judgment and <a href="#">132</a> Memorandum filed by Susan Brancato Vizas, Deborah Kay Miller, Atlantic Guns, Inc., Maryland Shall Issue, Inc. was filed incorrectly. <i>**A motion, supporting memorandum, exhibits, and proposed order must be filed as one entry. The motion should be filed as the main document with the supporting memorandum, exhibits, and proposed order as separate attachments to the main document. It has been noted as FILED IN ERROR, and the document link has been disabled.</i> (bmhs, Deputy Clerk) (Entered: 01/28/2021)
01/28/2021	<a href="#">135</a>	Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment</i> by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller (Attachments: # <a href="#">1</a> Memorandum in Support, # <a href="#">2</a> Exhibit 1, # <a href="#">3</a> Exhibit 2, # <a href="#">4</a> Exhibit 3, # <a href="#">5</a> Exhibit 4, # <a href="#">6</a> Exhibit 5, # <a href="#">7</a> Exhibit 6, # <a href="#">8</a> Exhibit 7, # <a href="#">9</a> Exhibit 8, # <a href="#">10</a> Exhibit 9, # <a href="#">11</a> Exhibit 10, # <a href="#">12</a> Exhibit 11, # <a href="#">13</a> Exhibit 12, # <a href="#">14</a> Exhibit 13, # <a href="#">15</a> Exhibit 14, # <a href="#">16</a> Exhibit 15, # <a href="#">17</a> Exhibit 16, # <a href="#">18</a> Exhibit 17, # <a href="#">19</a> Exhibit 18, #

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		<a href="#">20</a> Exhibit 19, # <a href="#">21</a> Exhibit 20, # <a href="#">22</a> Exhibit 21, # <a href="#">23</a> Exhibit 22, # <a href="#">24</a> Exhibit 23, # <a href="#">25</a> Exhibit 24, # <a href="#">26</a> Exhibit 25, # <a href="#">27</a> Exhibit 26, # <a href="#">28</a> Exhibit 27, # <a href="#">29</a> Exhibit 28, # <a href="#">30</a> Text of Proposed Order)(Sweeney, John) (Entered: 01/28/2021)
02/05/2021	<a href="#">136</a>	Consent MOTION for Extension of Time to File Response/Reply to <i>Motion to Strike</i> by Lawrence Hogan, William M. Pallozzi. (Attachments: # <a href="#">1</a> Text of Proposed Order)(Scott, Robert) (Entered: 02/05/2021)
02/05/2021	<a href="#">137</a>	ORDER granting <a href="#">136</a> Motion for Extension of Time. Signed by Judge Ellen L. Hollander on 2/5/2021. (bmhs, Deputy Clerk) (Entered: 02/05/2021)
02/24/2021	<a href="#">138</a>	Consent MOTION for Extension of Time to File Response/Reply by Lawrence Hogan, William M. Pallozzi. (Attachments: # <a href="#">1</a> Text of Proposed Order)(Scott, Robert) (Entered: 02/24/2021)
02/24/2021	<a href="#">139</a>	ORDER granting <a href="#">138</a> Consent Motion for Extension of Time. Signed by Judge Ellen L. Hollander on 2/24/2021. (bmhs, Deputy Clerk) (Entered: 02/24/2021)
03/08/2021	<a href="#">140</a>	RESPONSE to Motion re <a href="#">135</a> Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment</i> , REPLY to Response to Motion re <a href="#">125</a> MOTION for Summary Judgment filed by Lawrence Hogan, William M. Pallozzi. (Attachments: # <a href="#">1</a> Exhibit, # <a href="#">2</a> Exhibit, # <a href="#">3</a> Exhibit, # <a href="#">4</a> Exhibit, # <a href="#">5</a> Exhibit, # <a href="#">6</a> Exhibit, # <a href="#">7</a> Exhibit, # <a href="#">8</a> Exhibit, # <a href="#">9</a> Exhibit, # <a href="#">10</a> Exhibit placeholder for exhibit filed under seal, # <a href="#">11</a> Exhibit, # <a href="#">12</a> Exhibit, # <a href="#">13</a> Exhibit, # <a href="#">14</a> Exhibit, # <a href="#">15</a> Exhibit)(Dietrich, Ryan) (Entered: 03/08/2021)
03/08/2021	<a href="#">141</a>	-SEALED - NOTICE of Filing Under Seal Ex. 26, Confidential Stipulation by Lawrence Hogan, William M. Pallozzi re <a href="#">140</a> Response to Motion,,, Reply to Response to Motion,, (Attachments: # <a href="#">1</a> Exhibit)(Dietrich, Ryan) (Entered: 03/08/2021)
03/08/2021	<a href="#">142</a>	RESPONSE in Opposition re <a href="#">133</a> MOTION to Strike <i>Opinions of Defendants' Experts James Johnson, James Russell, and Daniel Webster</i> filed by Lawrence Hogan, William M. Pallozzi. (Attachments: # <a href="#">1</a> Exhibit, # <a href="#">2</a> Exhibit, # <a href="#">3</a> Exhibit)(Scott, Robert) (Entered: 03/08/2021)
03/08/2021	<a href="#">143</a>	UNREDACTED DOCUMENT (Dietrich, Ryan) (Entered: 03/08/2021)
03/08/2021	<a href="#">144</a>	(FILED IN ERROR) MOTION to Seal by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Dietrich, Ryan) Modified on 3/8/2021 (bmhs, Deputy Clerk). (Entered: 03/08/2021)
03/08/2021	<a href="#">145</a>	MOTION to Strike <i>Testimony of Plaintiffs' Lay Witness Mark Pennak and Experts Gary Kleck and Carlisle Moody</i> by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Memorandum in Support, # <a href="#">2</a> Exhibit, # <a href="#">3</a> Exhibit, # <a href="#">4</a> Exhibit)(Scott, Robert) (Entered: 03/08/2021)
03/08/2021	<a href="#">146</a>	MOTION to Seal by Lawrence Hogan, William M. Pallozzi (Attachments: # <a href="#">1</a> Text of Proposed Order)(Dietrich, Ryan) (Entered: 03/08/2021)
03/08/2021	<a href="#">147</a>	ORDER granting <a href="#">146</a> Defendants' Unopposed Motion to File Confidential Stipulation Under Seal. Signed by Judge Ellen L. Hollander on 3/8/2021. (bmhs, Deputy Clerk) (Entered: 03/09/2021)
03/15/2021	<a href="#">148</a>	Consent MOTION for Extension of Time to File Response/Reply as to <a href="#">145</a> MOTION to Strike <i>Testimony of Plaintiffs' Lay Witness Mark Pennak and Experts Gary Kleck and Carlisle Moody</i> by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller (Attachments: # <a href="#">1</a> Text of Proposed Order)(Sweeney, John) (Entered: 03/15/2021)

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03/15/2021	<a href="#">149</a>	ORDER granting <a href="#">148</a> Motion for Extension of Time. Signed by Judge Ellen L. Hollander on 3/15/2021. (bmhs, Deputy Clerk) (Entered: 03/15/2021)
04/14/2021	<a href="#">150</a>	REPLY to Response to Motion re <a href="#">135</a> Cross MOTION for Summary Judgment <i>and Opposition to Defendants' Motion for Summary Judgment</i> filed by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller. (Attachments: # <a href="#">1</a> Exhibit 1, # <a href="#">2</a> Exhibit 2, # <a href="#">3</a> Exhibit 3, # <a href="#">4</a> Exhibit 4)(Sweeney, John) (Entered: 04/14/2021)
04/14/2021	<a href="#">151</a>	RESPONSE in Opposition re <a href="#">145</a> MOTION to Strike <i>Testimony of Plaintiffs' Lay Witness Mark Pennak and Experts Gary Kleck and Carlisle Moody</i> filed by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller. (Attachments: # <a href="#">1</a> Exhibit 1, # <a href="#">2</a> Exhibit 2, # <a href="#">3</a> Exhibit 3, # <a href="#">4</a> Exhibit 4)(Sweeney, John) (Entered: 04/14/2021)
04/14/2021	<a href="#">152</a>	REPLY to Response to Motion re <a href="#">133</a> MOTION to Strike <i>Opinions of Defendants' Experts James Johnson, James Russell, and Daniel Webster</i> filed by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller.(Sweeney, John) (Entered: 04/14/2021)
04/20/2021	<a href="#">153</a>	Consent MOTION for Extension of Time to File Response/Reply as to <a href="#">145</a> MOTION to Strike <i>Testimony of Plaintiffs' Lay Witness Mark Pennak and Experts Gary Kleck and Carlisle Moody</i> , <a href="#">151</a> Response in Opposition to Motion, by Lawrence Hogan, William M. Pallozzi. (Attachments: # <a href="#">1</a> Text of Proposed Order)(Scott, Robert) (Entered: 04/20/2021)
04/20/2021	<a href="#">154</a>	ORDER granting <a href="#">153</a> Consent Motion for Extension of Time. Signed by Judge Ellen L. Hollander on 4/20/2021. (bmhs, Deputy Clerk) (Entered: 04/20/2021)
05/06/2021	<a href="#">155</a>	REPLY to Response to Motion re <a href="#">145</a> MOTION to Strike <i>Testimony of Plaintiffs' Lay Witness Mark Pennak and Experts Gary Kleck and Carlisle Moody</i> filed by Lawrence Hogan, William M. Pallozzi. (Attachments: # <a href="#">1</a> Exhibit)(Scott, Robert) (Entered: 05/06/2021)
07/27/2021	<a href="#">156</a>	MEMORANDUM OPINION. Signed by Judge Ellen L. Hollander on 7/27/2021. (dass, Deputy Clerk) (Entered: 07/27/2021)
07/27/2021	<a href="#">157</a>	ORDER denying Plaintiff's <a href="#">133</a> Motion to Strike; granting in part and denying in part Defendants' <a href="#">145</a> Motion to Strike as set forth. Signed by Judge Ellen L. Hollander on 7/27/2021. (dass, Deputy Clerk) (Entered: 07/27/2021)
08/12/2021	<a href="#">158</a>	-SEALED- MEMORANDUM OPINION. Signed by Judge Ellen L. Hollander on 8/12/2021. (c/em 8/12/21 bmhs, Deputy Clerk) (Entered: 08/12/2021)
08/12/2021	<a href="#">159</a>	ORDER directing the Clerk to substitute Colonel Woodrow W. Jones, III as a defendant in lieu of Colonel William M. Pallozzi; granting <a href="#">125</a> Defendants' Motion for Summary Judgment; and denying <a href="#">135</a> Plaintiffs' Motion for Summary Judgment. Signed by Judge Ellen L. Hollander on 8/12/2021. (bmhs, Deputy Clerk) (Entered: 08/12/2021)
08/23/2021	<a href="#">160</a>	MOTION for Leave to File <i>a Redacted Version of the Memorandum Opinion</i> by Atlantic Guns, Inc. (Attachments: # <a href="#">1</a> Attachment, # <a href="#">2</a> Text of Proposed Order)(Sweeney, John) (Entered: 08/23/2021)
08/23/2021	<a href="#">161</a>	ORDER granting <a href="#">160</a> Plaintiff Atlantic Guns' Motion to File a Redacted Version of the Memorandum Opinion. Signed by Judge Ellen L. Hollander on 8/23/2021. (bmhs, Deputy Clerk) (Entered: 08/24/2021)
08/23/2021	<a href="#">162</a>	MEMORANDUM OPINION. Signed by Judge Ellen L. Hollander on 8/12/2021. (bmhs, Deputy Clerk) (Entered: 08/24/2021)



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09/10/2021	<a href="#">163</a>	NOTICE OF APPEAL as to <a href="#">159</a> Order on Motion for Summary Judgment,,, <a href="#">157</a> Order on Motion to Strike, by Atlantic Guns, Inc., Susan Brancato Vizas, Maryland Shall Issue, Inc., Deborah Kay Miller. Filing fee \$ 505, receipt number 0416-9485494.(Sweeney, John) (Entered: 09/10/2021)
09/13/2021	<a href="#">164</a>	Transmission of Notice of Appeal and Docket Sheet to US Court of Appeals re <a href="#">163</a> Notice of Appeal,. IMPORTANT NOTICE: To access forms which you are required to file with the United States Court of Appeals for the Fourth Circuit please go to <a href="http://www.ca4.uscourts.gov">http://www.ca4.uscourts.gov</a> and click on Forms & Notices.(slss, Deputy Clerk) (Entered: 09/13/2021)
09/16/2021	<a href="#">165</a>	USCA Case Number 21-2017 for <a href="#">163</a> Notice of Appeal, filed by Susan Brancato Vizas, Deborah Kay Miller, Atlantic Guns, Inc., Maryland Shall Issue, Inc.. Case Manager - Jeffrey S. Neal (jb5, Deputy Clerk) (Entered: 09/16/2021)
09/23/2021	<a href="#">166</a>	NOTICE OF APPEAL as to <a href="#">157</a> Order on Motion to Strike, by Lawrence Hogan, Woodrow W. Jones, III. Filing fee \$ 505, receipt number 0416-9510993.(Dietrich, Ryan) (Entered: 09/23/2021)
09/24/2021	<a href="#">167</a>	Transmission of Notice of Appeal and Docket Sheet to US Court of Appeals re <a href="#">166</a> Notice of Appeal. IMPORTANT NOTICE: To access forms which you are required to file with the United States Court of Appeals for the Fourth Circuit please go to <a href="http://www.ca4.uscourts.gov">http://www.ca4.uscourts.gov</a> and click on Forms & Notices.(ko, Deputy Clerk) (Entered: 09/24/2021)
09/27/2021	<a href="#">168</a>	USCA Case Number 21-2053 for <a href="#">166</a> Notice of Appeal filed by Woodrow W. Jones, III, Lawrence Hogan. Case Manager - Jeffrey S. Neal (ko, Deputy Clerk) (Entered: 09/28/2021)
09/27/2021	<a href="#">169</a>	ORDER of USCA consolidating USCA NO. 21-2017 and USCA No. 21-2053 as cross-appeals as to <a href="#">163</a> Notice of Appeal and <a href="#">166</a> Notice of Appeal (ko, Deputy Clerk) (Entered: 09/28/2021)
10/08/2021	<a href="#">170</a>	MEMORANDUM to Counsel. Signed by Judge Ellen L. Hollander on 10/8/2021. (bmhs, Deputy Clerk) (Entered: 10/12/2021)
10/12/2021	<a href="#">171</a>	MEMORANDUM OPINION. Signed by Judge Ellen L. Hollander on 8/12/2021. (bmhs, Deputy Clerk) (Entered: 10/12/2021)
11/02/2021	<a href="#">172</a>	ORDER of USCA granting motion to hold appeal in abeyance as to <a href="#">163</a> Notice of Appeal, filed by Susan Brancato Vizas, Deborah Kay Miller, Atlantic Guns, Inc., Maryland Shall Issue, Inc. (ko, Deputy Clerk) (Entered: 11/02/2021)
05/10/2022	<a href="#">173</a>	NOTICE by Atlantic Guns, Inc. <i>Notice of Withdrawal of Appearance</i> (Woodward, Tara) (Entered: 05/10/2022)

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District of Maryland (CM/ECF Live NextGen 1.6)

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IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND

MARYLAND SHALL ISSUE, INC.  
for itself and its members,  
1332 Cape St. Claire Rd #342  
Annapolis, MD 21409

ATLANTIC GUNS, INC.  
944 Bonifant Street  
Silver Spring, MD 20910

ANA SLIVEIRA  
44512 Gray Wolf Street  
California, MD 20619

DEBORAH KAY MILLER  
297 Aston Forest Lane  
Crownsville, MD 21032-1605

SUSAN BRANCATO VIZAS  
8002 Bull Rush Court  
Frederick, Maryland 21701-1508

CHRISTINE BUNCH  
6322 Jacob's Ct.  
Eldersburg, MD 21784,

Plaintiffs

v.

LAWRENCE HOGAN, in his capacity of  
GOVERNOR OF MARYLAND  
100 State Circle  
Annapolis, MD 21401

and

WILLIAM M. PALLOZZI, in his capacity of  
SUPERINTENDENT, MARYLAND  
STATE POLICE  
1201 Reisterstown Road  
Pikesville, Maryland 21208,

Defendants

Case # 16-cv-3311-MJG



**FIRST AMENDED COMPLAINT**

COME NOW the above-named plaintiffs, by and through counsel, stating as follows:

**INTRODUCTION**

1) In 2013, Maryland passed some of the most restrictive firearms legislation in the nation, stripping all Maryland residents of the constitutional right to purchase a handgun until they have complied with an extremely burdensome licensing scheme.

2) Maryland's requirement for a "Handgun Qualification License" ("HQL") before residents may exercise their constitutional rights reduces those rights to mere privileges to be granted or denied at the whim of public officials and private individuals, accountable to no one, to whom the State has impermissibly delegated the authority to review applicants.

3) Maryland's Handgun Qualification License process is lengthy (averaging a month), expensive (totaling hundreds of dollars in fees, costs and travel, not counting time off of work), invasive (including fingerprints and a full background investigation), and completely unnecessary. Every handgun purchaser must already pass a background check under federal law which the federal government has streamlined via computer to take place in mere minutes. Under prior Maryland law, as it remains to this day, every handgun purchaser is subjected to the same background check required for a Handgun Qualification License for every purchase of every handgun, including purchases taking place immediately after receipt of the Handgun Qualification License.

4) This lawsuit seeks to relieve the Maryland taxpayer of the burden of an unnecessary and expensive process and to restore to Maryland residents their constitutional right to purchase a handgun.

**THE PARTIES**

5) Plaintiff Ana Sliveira is a natural person and a citizen of the United States and of the State of Maryland.

6) Ms. Sliveira is employed in a national security position as a Department of Defense federal contractor employee. She holds a security clearance with the government.

7) Ms. Sliveira is a single mother of young children who live at home with her. Ms. Sliveira does not currently own a firearm, but she would like to purchase a handgun for the protection of herself and her family in the home, as well as other lawful purposes.

8) Ms. Sliveira does not currently have an HQL, which is necessary under current law before she may purchase a handgun.

9) But for Maryland's requirement for a HQL, Ms. Sliveira could lawfully purchase and own a handgun. Ms. Sliveira has been deterred from purchasing a handgun because of the expense and inconvenience of the HQL application process and its constituent parts.

10) Ms. Sliveira was a victim of the recent Office of Personnel Management ("OPM") data breach in which her detailed personal information was hacked by unknown criminals and thus subject to sale or misuse by persons in Maryland and elsewhere. This breach and resulting disclosure of her personal information heightens her concerns for her safety and well-being as well as that of her children.

11) Plaintiff Deborah Kay Miller is a natural person and a citizen of the United States and of the State of Maryland.

12) Ms. Miller is a General Member of Plaintiff organization, Maryland Shall Issue ("MSI"). Ms. Miller would like to purchase a handgun for self-defense, target practice, and other lawful purposes.

13) Ms. Miller does not currently have an HQL, which is necessary under current law before she may purchase a handgun.

14) But for Maryland's requirement for an HQL, Ms. Miller could lawfully purchase and own a handgun. Ms. Miller has been deterred from purchasing a handgun because of the expense and inconvenience of the HQL application process and its constituent parts.

15) Plaintiff Susan Brancato Vizas is a natural person and a citizen of the United States and of the State of Maryland.

16) Ms. Vizas is a 44 year old mother of three (ages 9-15), who has taken (and passed) Hunter Safety Training. However, the subsequent steps for obtaining an HQL are sufficiently burdensome that she has not moved forward.

17) Ms. Vizas would like to purchase a handgun for self-defense, target practice, and other lawful purposes.

18) Ms. Vizas does not currently have an HQL, which is necessary under current law before she may purchase a handgun.

19) But for Maryland's requirement for an HQL, Ms. Vizas could lawfully purchase and own a handgun. Ms. Vizas has been deterred from purchasing a handgun because of the expense and inconvenience of the HQL application process and its constituent parts.

20) Plaintiff Christine Bunch is a natural person and a citizen of the United States and of the State of Maryland.

21) Ms. Bunch would like to purchase a handgun for self-defense, target practice, and other lawful purposes.

22) Ms. Bunch does not currently have an HQL, which is necessary under current law before she may purchase a handgun.

23) But for Maryland's requirement for an HQL, Ms. Bunch could lawfully purchase and own a handgun.

24) Ms. Bunch cannot afford the time or excessive cost of acquiring an HQL. Thus, Ms. Bunch has been deterred from purchasing a handgun because of the expense and inconvenience of the HQL application process and its constituent parts.

25) Plaintiff Maryland Shall Issue, Inc. ("MSI") is a non-profit membership organization incorporated under the laws of Maryland with its principal place of business in Annapolis, Maryland. MSI has approximately 772 members statewide. MSI is an all-volunteer, non-partisan organization dedicated to the preservation and advancement of gun owners' rights in Maryland. It seeks to educate the community about the right of self-protection, the safe handling of firearms, and the responsibility that goes with carrying a firearm in public. The purposes of MSI include promoting the exercise of the right to keep and bear arms; and education, research, and legal action focusing on the Constitutional right to privately own, possess and carry firearms. MSI brings this action on behalf of itself and its members. Maryland's HQL requirements directly harm MSI as an organization by undermining its message and acting as an obstacle to the organization's objectives and purposes. The membership of MSI includes individuals who do not possess an HQL and who are subject to the HQL requirements and the implementing regulations and practices issued by the Maryland State Police and individuals who have been deterred from purchasing a handgun because of the expense and inconvenience of the HQL application process and its constituent parts. MSI membership includes persons who are Qualified Handgun Instructors under Maryland law and who are thus qualified by Maryland to provide the training required by MD Code, Public Safety, § 5-117.1 and the implementing regulations issued by the Maryland State Police.

26) Plaintiff Atlantic Guns, Inc. is a business headquartered in the State of Maryland and duly authorized to do business in the State. Atlantic Guns is a federally-licensed firearms dealer and Maryland Regulated Firearms Dealer in good standing in the business of lawfully and responsibly selling firearms throughout the state and elsewhere. The constitutional rights of Atlantic Guns, its owners, and its customers are being violated by the HQL requirement. As a result of the legislation challenged herein, Atlantic Guns, is not able to provide handguns to those Maryland residents who lack Handgun Qualification Licenses and are deterred from purchasing a handgun because of the expense and inconvenience of the HQL application process and its constituent parts. Atlantic Guns has suffered and continues to suffer a significant reduction in its business due to the HQL requirement. Atlantic Guns is an aggrieved party and a proper plaintiff. In addition to bringing suit on its own behalf, Atlantic Guns represents the interests of its customers. Specifically, Atlantic Guns represents the interests of all of its customers who are unable to purchase a handgun because of the unconstitutional HQL requirement. Atlantic Guns' customers routinely express an interest in purchasing handguns, but Atlantic Guns cannot sell them handguns because of the HQL requirement. Many of these customers are deterred from completing the HQL application process because of the expense and inconvenience of the HQL application process and its constituent parts. The result is the complete deprivation of the customers' Second Amendment right to obtain and keep a handgun for self-defense in the home.

27) Defendant Lawrence Hogan is the Governor of the State of Maryland. As such he is the executive branch official with the ultimate responsibility for the enforcement of Maryland's licensing scheme for the ownership of handguns. Together with the co-defendant, Governor Hogan is ultimately responsible for executing and administering the State of

Maryland's laws, customs, practices, and policies at issue in this lawsuit. Governor Hogan has enforced the challenged laws, customs and practices against plaintiffs, and is in fact presently enforcing the challenged laws, customs and practices against plaintiffs. Defendant Hogan is sued in his official capacity as the Governor of the State of Maryland.

28) Defendant William M. Pallozzi is the Secretary and Superintendent of the Maryland State Police. Defendant Pallozzi is directly responsible for executing and administering the State of Maryland's laws, customs, practices, and policies at issue in this lawsuit; has enforced the challenged laws, customs and practices against plaintiffs, and is in fact presently enforcing the challenged laws, customs and practices against plaintiffs. Defendant Pallozzi is sued in his capacity as the official in charge of issuing Handgun Qualification Licenses and adopting regulations and practices governing Handgun Qualification Licenses. MD Code, Public Safety, § 5-117.1(d), (n). The Secretary has in fact issued such regulations, as codified in MD COMAR ADC 29.03.01.01, *et seq.* The Secretary of the Maryland State Police has likewise adopted practices that bear on the issues presented in this Complaint.

### **JURISDICTION AND VENUE**

29) This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331, 1343, 2201, 2202, and 42 U.S.C. § 1983. This Court has supplemental jurisdiction over the state law claims alleged this complaint under 28 U.S.C. § 1367. Venue lies in this Court pursuant to 28 U.S.C. § 1391.

### **STATEMENT OF FACTS**

30) The Second Amendment to the United States Constitution provides: "A well regulated Militia being necessary to the security of a free State, the right of the people to keep and bear Arms shall not be infringed."

31) The Second Amendment guarantees to law-abiding individuals a fundamental right to purchase, possess, sell and own handguns.

32) The Second Amendment right to keep and bear arms applies as against the states by operation of the Fourteenth Amendment.

33) The Second Amendment includes the right to keep and bear handguns.

34) The Second Amendment right to keep and bear handguns necessarily includes the rights to purchase, sell, rent, lease, receive and provide a handgun.

35) Maryland generally prohibits a person from purchasing, renting, or receiving a handgun absent a valid HQL.

36) Maryland prohibits all persons, including a federal firearms licensee and dealer, from selling, renting or transferring a handgun to a purchaser, lessee, or transferee unless the purchaser, lessee, or transferee presents to the dealer or other person a valid handgun qualification license issued to the purchaser, lessee, or transferee by the Secretary of the Maryland State Police under MD Code, Public Safety, § 5-117.1, or is otherwise exempt from the HQL requirement under Section 5-117.1.

37) To qualify for an HQL, Maryland and the Maryland State Police, through their implementing regulations and practices, require that an applicant must:

a) file an application on-line through the Internet, disclosing one's name, address, driver's license or photographic identification soundex number, place and date of birth, height, weight, race, sex, eye and hair color, occupation, and home and work telephone;

b) own or obtain access to a computer with an internet connection for electronic submission of the HQL application (applications are not accepted in hard copy);

c) own or have access to a scanner to scan and copy the certification issued by a State-certified handgun instructor as part of the application electronic submission (the State Police make no provisions for applying without access to a scanner);

d) have a fixed address and telephone number;



e) submit, as part of the application, a complete set of the applicant's fingerprints, taken and submitted in the manner prescribed by the Secretary on the application; As implemented by the Maryland State Police, fingerprints will be accepted only if the prints are taken via "livescan" technology and only by a State-certified vendor; the application generally must be submitted within 72 hours of the time the prints are taken;

f) pay the State-certified livescan fingerprint vendor's fees, which include a Livescan Fingerprinting fee of \$17.00, a State of Maryland criminal records check fee of \$18.00 (service provided by the Maryland Department of Public Safety and Correctional Services) and a Federal criminal records check fee of \$14.50 (service provided by the Federal Bureau of Investigation), as further detailed in COMAR 12.15.01.15.

g) complete a 4-hour Firearms Safety Training Course taught by a private, State-approved Qualified Handgun Instructor within 3 years prior to the submission of an HQL application covering the following:

- (1) State Firearm Law. Overview of the State firearm laws, including discussion of what constitutes a regulated firearm, how to properly purchase or transfer a firearm, where allowed to carry or transport a firearm, when necessary to possess a carry permit, and who is prohibited from possessing firearms.
- (2) Home Firearm Safety. Overview of handgun and firearm safety in the home, including discussion of access to minors, locking and storing of firearms, and use of safety devices, such as secure lock boxes.
- (3) Handgun Mechanisms and Operation. Overview of the proper operation and safe handling of a handgun, including cleaning and maintenance, the loading and unloading of ammunition, and the differences between revolvers and semi-automatic handguns.
- (4) Operation and Handling Demonstration. Orientation that demonstrates the applicant's safe operation and handling of a firearm, including a practice component in which the applicant safely fires at least one round of live ammunition.

h) locate and contact a private State-certified training instructor, arrange for training and travel to the Firearms Safety Training Course offered by such instructor (Maryland makes no provisions for those who cannot afford to travel);

i) pay the instructor directly for the Firearms Safety Training Course; instructors are free to charge any fee in any amount for providing instruction (Maryland makes no provisions for those who cannot afford to pay);

j) travel to and attend the training course, which means, because the Maryland State Police has required the discharge of live ammunition as part of the training, the applicant must travel to a shooting range for completion of the training and pay whatever fees the range charges;

k) pay a \$50.00 application fee, or a \$20.00 fee to renew the HQL, which expires every 10 years (Maryland makes no provisions for those who cannot afford to pay these fees);

l) have a credit or debit card (the State Police make no provision for payment in cash or check); and

m) wait 27 to 28 days on average before an HQL is received, during which time, the applicant's constitutional right to purchase a handgun is totally denied (Maryland makes no provision for an immediate or emergency issuance of a HQL).

38) Maryland residents are completely barred from purchasing, renting, or receiving a handgun prior to applying for an HQL and while their HQL application is pending.

39) The average time reported by the State Police to process a completed HQL is 27 to 28 days.

40) The requirement for an HQL effectively amounts to a 27 to 28 day waiting period before purchasing a handgun. This is in addition to the seven day waiting period for handgun purchases.

41) In order to implement the HQL requirement, the Maryland State Police Licensing Division adopted Standard operating Procedure Index # 29-1403 (SOP 29-1403).

42) SOP 29-1403.06(D) reflects that the initial background check performed after an HQL Application is received is limited to searches of computer databases. If the computer database search raises no concern, the applicant is approved.

43) In the vast majority of cases, database searches required by the HQL take mere minutes. In cases of such approvals without further review, there is no technological or practical

reason why the State Police could not perform the statutorily-mandated collection and processing of HQL applications within 24 hours.

44) The amount of time permit applicants are required to wait for approval is unduly burdensome, particularly for people who hunt for food, require a firearm to earn a living, are elderly, terminally ill and/or who have an urgent need for firearms for self-defense because they live in a high crime area or have been threatened. The HQL requirements contain no provisions for the immediate issuance of a HQL in any circumstances, thus effectively depriving persons the means of timely acquiring a handgun needed for self-defense.

45) Even after receipt of an HQL, Maryland law, MD Code, Public Safety, § 5-123, imposes an additional 7-day waiting period before a purchaser may actually receive a purchased handgun.

46) The HQL requirements imposed by the Maryland State Police regulations heavily discriminates against and effectively act as a complete barrier to the acquisition of the HQL by the poor or disadvantaged citizens of Maryland who live in urban areas, where access to a public shooting range is effectively non-existent, such as the City of Baltimore. The underlying intent and practical effect of these requirements is the disenfranchisement of Second Amendment rights for the poor and disadvantaged who may be concentrated in such urban areas and who may lack the means to travel to rural areas for live fire instruction. A similar barrier is created by the mandated use of private, State-certified live-scan fingerprint vendors and private State-certified instructors. Such vendors or instructors are not readily available in many areas of the State and yet the Maryland State Police have refused to provide these services or provide alternatives. These and the other requirements imposed by the HQL, the regulations and Maryland State Police practices, separately and taken together, form undue and effective practical barriers to,

and undue burdens on, the exercise of fundamental constitutional rights preserved by the Second Amendment and are, thus, unconstitutional.

**COUNT I (SECOND AMENDMENT - 42 U.S.C. § 1983)**

47) All paragraphs of this Complaint are incorporated herein by reference.

48) The requirement for an HQL in general and the specific demands made by Maryland before an HQL is issued are neither longstanding in Maryland or elsewhere in the United States.

49) The HQL requirement itself violates the Second Amendment because it is a redundant regulatory requirement that unnecessarily chills the exercise of Second Amendment rights and deters law-abiding, responsible individuals from purchasing handguns. The purported purpose of HQL requirements – to ensure purchasers of handguns are law-abiding, responsible citizens – is fully satisfied by the 77R background check process, which is conducted each and every time an individual purchases a handgun in Maryland, despite the individual having a valid HQL.

50) Marylanders who are not otherwise exempt from the HQL requirement, including Plaintiffs, may only exercise their Second Amendment right to obtain and keep a handgun after undergoing an onerous, expensive and lengthy application process, receiving an HQL, and then undergoing a separate 77R background check, which, for decades, has been adequate to ensure that only qualified individuals obtain handguns.<sup>1</sup> This two-step process required to exercise

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<sup>1</sup> Plaintiffs are not challenging the 77R background check process, which include the federally-mandated NICS check, that Maryland has enacted and applies to all transfers of regulated firearms. Rather, their challenged is isolated to the redundant HQL requirement, which is nothing more than a lengthy process to receive permission from the government to undergo the now-unnecessary 77R background check.

constitutional rights would not be permitted with respect to any other fundamental right, and cannot be countenanced with respect to the Second Amendment right at issue here.

51) The requirement for an HQL in general and the specific demands made by Maryland before an HQL is issued, collectively and individually, do not implicate historically-recognized limitations or prohibitions on Second Amendment activity. The requirements imposed by Section 5-117.1, taken in their totality, are unrelated to and do not reasonably advance any compelling governmental interest in public safety. In particular, the required training and other requirements imposed by Section 5-117.1 are far more onerous, expensive and time-consuming than the requirements imposed by any other jurisdiction in the United States for the purchase of a handgun for possession in the home.

52) Even if the HQL requirement itself were not constitutionally infirm, the onerous requirements of the HQL application process collectively violate the Second Amendment.

53) As set forth in detail above, the HQL application process requires 1) in-person training, with a live-fire component, 2) access to an internet-connected computer, 3) a debit/credit card, 4) a fixed address, and 5) the provision of fingerprints.

54) These portions of the HQL application process act in concert to effect an unconstitutional burden on the exercise of Plaintiffs' fundamental Second Amendment rights that cannot withstand any level of heightened scrutiny.

55) Additionally, the individual component parts of the HQL process listed above are themselves individual unconstitutional restrictions on the exercise of the Second Amendment right to acquire a handgun for self-defense in the home under any level of heightened scrutiny. Each of these requirements is not sufficiently tailored to achieve a legitimate government interest because there are obvious, effective, less restrictive alternatives to each of them. The 77R

process is a less restrictive alternative that demonstrates the infirmity of the HQL application process. The burdens caused by the HQL application's requirements affect most strongly the economically disadvantaged. The result is that those most in need of a means to protect themselves are those least able to meet Defendants' draconian requirements and, therefore, are those most likely to be unable to exercise their constitutional rights.

56) The requirement for an HQL in general and the specific demands made by Maryland in its implementation, individually and taken as a whole, were enacted and/or implemented with the specific intent of discouraging the citizens of Maryland, including the membership of plaintiff MSI and plaintiff Atlantic Guns, from exercising their Second Amendment right to purchase, sell, rent and receive handguns.

57) The HQL requirement, facially and as implemented by the Maryland State Police in its regulations and practices, acts and was intended to act, as a rationing of Second Amendment rights by discouraging and burdening the exercise of a law-abiding citizen's right to purchase or acquire a handgun. The principal purpose and the objective of the HQL requirement, facially and as implemented by the Maryland State Police, are to limit and restrict the number of handguns that are purchased or acquired in Maryland. These requirements act as especially effective barriers to the otherwise lawful acquisition of a handgun by the poor and the disadvantaged, including minorities (who, due to historical socio-economic factors, are disproportionately poor). That purpose and effect is to discourage and ration the exercise of the Second Amendment fundamental constitutional right to purchase or acquire a handgun. That is illegitimate and unconstitutional.

**COUNT II (DUE PROCESS - 42 U.S.C. § 1983)**

58) All paragraphs of this Complaint are incorporated herein by reference.



59) The HQL requirement violates the Due Process Clause of the Fourteenth Amendment because: a) it vests private “Qualified Handgun Instructors” chosen by the State with the absolute authority to grant or deny an individual his or her Second Amendment Rights without any appeal or recourse to the courts; and b) the terms “receive” or “receipt” as used in the relevant statute are void for vagueness.

60) The Code of Maryland Regulations (COMAR MD ADC 29.03.01.29) requires that an individual’s application for an HQL must be accompanied by a “Firearms Safety Training Certificate issued by a Qualified Handgun Instructor.”

61) HQL applicants bear the burden of proof of their entitlement to the “right” to bear arms; receive no hearing before their entitlement to this right is initially determined, and receive no post-deprivation judicial review when and if such certification is denied by an instructor. No provision is made in law or through regulation for an appeal to the courts or otherwise of the private instructor’s decision not to issue a Firearms Safety Training Certificate. Although the challenged laws do provide an appeal for the denial of an HQL application itself, an HQL application cannot be submitted without a firearms safety training certificate. Accordingly, individuals who have been denied a certificate of completion have no recourse, because they cannot actually initiate the only process from which they could take an appeal.

62) Before a constitutional right may be denied, an individual is entitled to notice and an opportunity to be heard as well as eventual review by a court of appropriate jurisdiction.

63) Section 5-117.1 provides that a person may not “purchase, rent, or receive a handgun” without an HQL. MD Code, Public Safety, § 5-144(a)(1) makes a knowing participation in “the receipt of a regulated firearm in violation of this subtitle” a crime,

punishable upon conviction by “imprisonment not exceeding 5 years or a fine not exceeding \$10,000 or both.”

64) MD Code, Public Safety, § 5-101 defines the term “rent” and the meaning of “purchase” is reasonably apparent, but the terms “receive” or “receipt” are entirely undefined in either the statute or in the Maryland State Police implementing regulations.

65) Maryland Shall Issue, in its comments timely filed with the Maryland State Police during the rule making proceedings, specifically requested the Maryland State Police to define these terms “receive” and “receipt.” The Maryland State Police refused and failed to do so without explanation and without addressing the concerns and objections set forth in those comments. Members of Maryland Shall Issue handle handguns routinely in the presence of persons, including family and friends, who do not or may not possess an HQL but who may nonetheless wish to participate in handgun shooting at a range or receive handgun training involving the temporary receipt of a handgun. MSI and its members are irreparably harmed by the Maryland State Police’s refusal to define these terms “receipt” and “receive.” That refusal, and the statute’s failure to define these terms, exposes such members to the threat of arbitrary and discriminatory criminal prosecution under Section 5-144.

66) The usage of the terms “receive” in Section 5-117.1 and “receipt” in Section 5-144 are fatally vague and ambiguous and lead to absurd results under Maryland law, including possibly criminalizing conduct that no reasonable person would believe or understand to be wrongful. Such conduct could include the temporary receipt of a handgun by a spouse, family member or friend, who may lack an HQL, at a firing range, or in the home or such receipt while conducting firearms instruction for such persons lacking an HQL. These terms could be read to criminalize such innocent conduct and are so standardless that they authorize or encourage

seriously discriminatory enforcement. Persons, including the plaintiffs and members of Maryland Shall Issue, regulated by these provisions have a constitutional right, protected by the Due Process Clause of the Fourteenth Amendment to know to a reasonable certainty what is required of them so they may act accordingly. The undefined terms “receive” as used in Section 5-117.1 and “receipt” as used in Section 5-144 fail this test and are thus void under the Due Process Clause of the Fourteenth Amendment.

67) Without limitation and for purposes of example only, the failure to define “receive” and “receipt” in the statute leaves persons woefully uninformed as to whether the following innocent conduct is unlawful: a) in the event that an individual lawfully carrying a handgun on his or her person is medically incapacitated, may a spouse or other family member secure the handgun?; b) in the event of an automobile accident involving a car in which a handgun was lawfully being transported, may a spouse or other family member secure the handgun until police arrive?; c) in the event of a divorce involving a handgun declared marital property, may a spouse sell the handgun?; d) may a responsible, otherwise law-abiding adult handle a handgun at a gun store without an HQL?; and e) may an HQL holder and handgun owner briefly permit his or her handgun to be fired by someone else in the presence of the HQL holder at a firing range? There are many more examples.

68) The refusal or failure of the Maryland State Police to define “receive” as used in Section 5-117.1 and “receipt” as used in Section 5-144, despite a specific request to do so in the pertinent rule making proceeding, was arbitrary and capricious, unreasonable, and an abuse of discretion under Maryland administrative law which provides that reviewing courts have an inherent power to review illegal, unreasonable, arbitrary or capricious administrative action.

69) The HQL process as currently implemented in Maryland denies applicants due process of law.

70) Because of the administration and enforcement of the above provisions of the Firearms Safety Act of 2013 by the defendants, the plaintiffs have been, and will continue to be, subjected to irreparable harm.

71) At all times herein, the defendants were acting under color of state law.

72) All of the statutes, regulations, court actions, customs and practices referenced herein constitute state action within the meaning of the Constitution.

73) At all times herein, the actions of the defendants have been intentional or in reckless disregard of the clearly established rights of the plaintiffs.

**COUNT III (Ultra Vires)**

74) All paragraphs of this Complaint are incorporated herein by reference.

75) This Count is brought under Maryland state law pursuant to this Court's supplemental jurisdiction granted by 28 U.S.C. § 1367.

76) Maryland Shall Issue participated in and submitted objections and comments in the rule making proceeding conducted by the Maryland State Police prior to its issuance of the final regulations concerning the HQL requirements.

77) Section 5-117.1 of the Firearms Safety Act of 2013 provides that:

...the Secretary **shall issue** a handgun qualification license to a person who the Secretary finds:

(1) is at least 21 years old;

(2) is a resident of the State;

(3) except as provided in subsection (e) of this section, has demonstrated satisfactory completion, within 3 years prior to the submission of the application, of a firearms safety training course approved by the Secretary that includes: (i) a

minimum of 4 hours of instruction by a qualified handgun instructor; (ii) classroom instruction on: 1. State firearm law; 2. home firearm safety; and 3. handgun mechanisms and operation; and (iii) a firearms orientation component that demonstrates the person's safe operation and handling of a firearm; and

(4) based on an investigation, is not prohibited by federal or State law from purchasing or possessing a handgun

78) The Secretary is further instructed under Section 5-117.1 to conduct a background check and obtain a complete set of fingerprints as part of the application process for an HQL, but the Maryland State Police is not precluded by Section 5-117.1 from providing such services; it has chosen not to.

79) While Section 5-117.1(g) states that the applicant for an HQL should submit an application in the manner and format designated by the Secretary, the Secretary is not empowered to impose additional barriers and restrictions beyond those set forth in Section 5-117.1.

80) The statutory requirements to obtain an HQL do not include any of the following elements which the State Police nevertheless impose or require prior to issuing a HQL:

a) owning or obtaining access to a computer with an internet connection (applications are not accepted by the Maryland State Police in hard copy);

b) owning or having access to an electronic document scanner (the State Police make no provisions for applying without access to a scanner);

c) having a fixed address and telephone number;

d) while Section 5.117.1(f)(3)(i) requires the Secretary to obtain a complete set of the applicant's legible fingerprints taken in a format approved by the Director of the Central Repository and the Director of the Federal Bureau of Investigation, nothing in these provisions requires the Maryland State Police to accept only those fingerprints obtained through a State-certified live-scan vendor or refusing to provide fingerprinting services at Maryland State Police facilities;

e) having a credit card or debit card (the State Police make no provision for payment in cash or check);

f) requiring training by a private State certified instructor, and refusing to provide any training by the Maryland State Police

g) imposing a practice component in the training requirement in which the applicant fires at least one round of live ammunition, thereby requiring access to a shooting range.

81) The Secretary has unnecessarily made these requirements even more onerous by completely refusing or failing to approve any alternative training courses that would otherwise exempt individuals from the HQL training requirement, as authorized and contemplated by Section 5-117.1(e)(1). That provision expressly provides that a person need not complete the HQL training if the applicant “has completed a certified firearms training course approved by the Secretary.” Such fully sufficient training is readily available from National Rifle Association (“NRA”) certified instructors through well-established courses such as the NRA Basic Pistol Course, the NRA Personal Protection In The Home Course and the NRA Personal Protection Outside The Home Course and the Defensive Pistol Course.

82) In creating and enforcing the requirements listed above, and in failing to approve alternative training courses, the State Police have acted arbitrarily, unreasonably and beyond the statutory authority granted by elected representatives and are thus contrary to law and authority within the meaning of the Maryland State Administrative Procedure Act, MD Code, State Government, § 10-125(d)(2).

83) In creating and enforcing the requirements listed above, the State Police have acted contrary to the Second Amendment to the Constitution of the United States within the meaning of MD Code, State Government, § 10-125(d)(1).



84) In creating and enforcing the requirements listed above, the Maryland State Police have failed to comply with statutory requirements for adoption of these regulations within the meaning of MD Code, State Government, § 10-125(d)(3).

85) The Firearms Safety Act of 2013 only provides for “a nonrefundable application fee to cover the costs to administer the program of up to \$50.” MD Public Safety § 5-117.1(g)(2).

86) Despite this fifty dollar legislative limitation on any fees to cover the costs to administer the program, the State Police impermissibly shifted the burden of paying for the required training to the applicant. In doing so, the State Police have exceeded their statutory authority within the meaning of the Maryland State Administrative Procedure Act, MD Code, State Government, § 10-125(d)(2).

87) The foregoing actions of the Maryland State Police in issuing its HQL regulations and shifting the costs of training to applicants, and in particular, imposing a one-shot live-fire requirement, were arbitrary and capricious, unreasonable and an abuse of discretion under Maryland administrative law which provides that reviewing courts have an inherent power to review illegal, unreasonable, arbitrary or capricious administrative action.

#### **PRAYER FOR RELIEF**

Wherefore, the plaintiffs respectfully request that this Honorable Court issue:

a. An order declaring that MD Code, Public Safety, § 5-117.1, both on its face and as applied through foregoing implementing regulations and practices adopted by defendants, violates the Second Amendment of United States Constitution in violation of 42 U.S.C. § 1983;

b. An order declaring that MD Code, Public Safety, § 5-117.1, both on its face and as applied through foregoing implementing regulations and practices adopted by defendants, violates the Due Process Clause of the Fourteenth Amendment of the United States Constitution in violation of 42 U.S.C. § 1983;

c. An order permanently enjoining defendants from applying, enforcing or otherwise giving effect to MD Code, Public Safety, § 5-117.1 and to the implementing regulations and practices adopted by the Maryland State Police;

d. An order declaring that the Maryland State Police regulations and implementing practices concerning Section 5-117.1 are in excess of legal authority, contrary to the Second Amendment to the United States Constitution and do not comply with the statutory requirements of MD Code, State Government, § 10-125(d);

e. An order declaring that the terms “receive” and “receipt” in Section 5-117.1 and Section 5-144, respectively, are void for vagueness and thus unenforceable under the Due Process Clause of the Fourteenth Amendment;

f. An order declaring that the refusal or failure of the Maryland State Police to define or clarify the meaning of the terms “receive” and “receipt” in Section 5-117.1 and Section 5-144, respectively, as requested by plaintiff Maryland Shall Issue during rule making proceedings, or to respond to the comments submitted on this subject by plaintiff Maryland Shall Issue, was arbitrary, capricious, unreasonable and abuse of discretion;

g. An order enjoining defendants from enforcing the terms “receive” and “receipt” in Section 5-117.1 and Section 5-144, respectively, until such time as the Maryland State Police properly promulgate binding regulations defining these terms in a

manner that satisfies all applicable procedures and laws and the Constitution of the United States;

h. An order awarding reasonable attorneys' fees and costs pursuant to 42 U.S.C. § 1988;

i. Any further relief that the Court may find to be just and proper.

Respectfully submitted,

HANSEL LAW, PC

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IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND

MARYLAND SHALL ISSUE, INC.,  
et al.

Plaintiffs

VS.

LAWRENCE HOGAN, in his capacity  
of GOVERNOR OF MARYLAND, et al.

## Defendants

\* \* \* \* \*

MEMORANDUM AND ORDER RE: DISMISSAL

The Court has before it Defendants' Motion to Dismiss the Amended Complaint [ECF No. 18] and the materials submitted relating thereto. The Court has held a hearing and has had the benefit of the arguments of counsel.

## I. BACKGROUND

In 2013, the Maryland General Assembly passed the Firearm Safety Act of 2013 ("FSA"), to regulate the sale and possession of firearms within the state. The FSA includes a Handgun Qualification License provision ("HQL Provision" or "Provision"), Md. Code Ann., Pub. Safety § 5-117.1, which forbids the sale, rental, transfer, purchase, or receipt of a handgun by any person without a valid HQL issued by the Secretary, with certain exceptions.

Plaintiffs Maryland Shall Issue, Inc., Atlantic Guns, Inc., Ana Sliveira, Deborah Kay Miller, Susan Brancato Vizas,

and Christine Bunch (collectively "Plaintiffs") assert claims against Defendants Lawrence Hogan, in his official capacity as Governor of the State of Maryland, and William M. Pallozzi, in his official capacity as Secretary and Superintendent of the Maryland State Police (collectively "Defendants").

The Plaintiffs have filed the instant lawsuit, seeking an order declaring the HQL Provision unconstitutional on its face and as applied to the Plaintiffs, and to enjoin enforcement of Md. Code Ann., Pub. Safety § 5-117.1 and the implementing regulations and practices adopted by the Maryland State Police ("MSP").

Plaintiffs' Amended Complaint [ECF No. 13] presents three Counts:

Count I. Second Amendment (42 U.S.C. § 1983);

Count II. Fourteenth Amendment, Due Process (42 U.S.C. § 1983);

Count III. Ultra Vires (violation of Md. Code Ann., State Gov't § 10-125(d)).

By the instant motion, Defendants seek dismissal of the Amended Complaint pursuant to Rule<sup>1</sup> 12(b)(6) for failure to state a claim upon which relief can be granted.

## II. DISMISSAL STANDARD

A motion to dismiss filed pursuant to Rule 12(b)(6) tests

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<sup>1</sup> All "rule" references herein are to the Federal Rules of Civil Procedure.

the legal sufficiency of a complaint. A complaint need only contain “‘a short and plain statement of the claim showing that the pleader is entitled to relief,’ in order to ‘give the defendant fair notice of what the . . . claim is and the grounds upon which it rests.’” Bell Atl. Corp. v. Twombly, 550 U.S. 544, 555 (2007) (citations omitted). When evaluating a 12(b)(6) motion to dismiss, a plaintiff’s well-pleaded allegations are accepted as true and the complaint is viewed in the light most favorable to the plaintiff. However, conclusory statements or “a formulaic recitation of the elements of a cause of action will not [suffice].” Id. A complaint must allege sufficient facts “to cross ‘the line between possibility and plausibility of entitlement to relief.’” Francis v. Giacomelli, 588 F.3d 186, 193 (4th Cir. 2009) (quoting Twombly, 550 U.S. at 557).

Inquiry into whether a complaint states a plausible claim is “‘a context-specific task that requires the reviewing court to draw on its judicial experience and common sense.’” Id. (quoting Twombly, 550 U.S. at 557). Thus, if “the well-pleaded facts [contained within a complaint] do not permit the court to infer more than the mere possibility of misconduct, the complaint has alleged – but it has not ‘show[n]’ – ‘that the pleader is entitled to relief.’” Id. (quoting Ashcroft v. Iqbal, 556 U.S. 662, 679 (2009) (alteration in original)).



### III. DISCUSSION

#### A. Handgun Qualification License Provision

Plaintiffs challenge the HQL Provision of the FSA. The Provision provides that “[a] dealer or any other person may not sell, rent, or transfer a handgun” unless the purchaser, lessee, or transferee presents a valid handgun qualification license (“HQL”). Md. Code Ann., Pub. Safety § 5-117.1(b).

Furthermore, “[a] person may purchase, rent, or receive a handgun only if the person:

- (1) possesses a valid HQL [or meets certain statutory exceptions]<sup>2</sup> and
- (2) is not otherwise prohibited from purchasing or possessing a handgun under State or federal law.”

Id. § 5-117.1(c).

The statute states that the Secretary shall issue an HQL to a person who is (1) 21 years old, (2) a Maryland resident, (3) not prohibited by federal or state law from purchasing or possessing a handgun, and (4) has “demonstrated satisfactory

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<sup>2</sup> A person does not need an HQL if he or she:  
\* \* \*

- (ii) possesses valid credentials from a law enforcement agency or retirement credentials from a law enforcement agency;
- (iii) is an active or retired member of the armed forces of the United States or the National Guard and possesses a valid military identification card; or
- (iv) is purchasing, renting, or receiving an antique, curio, or relic firearm, as defined in federal law or in determinations published by the Bureau of Alcohol, Tobacco, Firearms and Explosives.

§ 5-117.1 (c).

completion" of a firearms safety training course approved by the Secretary within the three years prior to the application. Id.

§ 5-117.1(d). The training course is required to include:

- (a) a minimum of 4 hours of instruction by a qualified handgun instructor;
- (b) classroom instruction on:
  - (1) State firearm law;
  - (2) home firearm safety; and
  - (3) handgun mechanisms and operation; and
- (c) a firearms orientation component that demonstrates the person's safe operation and handling of a firearm.

Id. Certain individuals are exempt from the training course requirement.<sup>3</sup>

HQL applicants must submit:

- (1) an application in the manner and format designated by the Secretary;
- (2) a nonrefundable application fee to cover the costs to administer the program of up to \$50;

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<sup>3</sup> An HQL applicant does not have to complete a firearms safety training course if the applicant:

- "(1) has completed a certified firearms training course approved by the Secretary;
- (2) has completed a course of instruction in competency and safety in the handling of firearms prescribed by the Department of Natural Resources under § 10-301.1 of the Natural Resources Article;
- (3) is a qualified handgun instructor;
- (4) is an honorably discharged member of the armed forces of the United States or the National Guard;
- (5) is an employee of an armored car company and has a permit issued under Title 5, Subtitle 3 of the Public Safety Article; or
- (6) lawfully owns a regulated firearm."

§ 5-117.1 (e).

- (3) (i) proof of satisfactory completion of [an approved firearms safety training course]; or  
(ii) a valid firearms instructor certification;
- (4) any other identifying information or documentation required by the Secretary; and
- (5) a statement made by the applicant under the penalty of perjury that the applicant is not prohibited under federal or State law from possessing a handgun.

Id. § 5-117.1(g).

After receiving an application, the Secretary must complete a State and national criminal history records check using the applicant's fingerprints. The fees for these records checks are \$18.00 and \$14.50 respectively.

Within thirty days<sup>4</sup> of receiving a complete application, the Secretary will issue an approval or a written denial containing the reason for denial and a statement of the applicant's appeal rights.<sup>5</sup> An HQL is valid for ten years and may be renewed for successive ten-year periods as long as the applicant possesses the qualifications for the HQL and pays a \$20.00 application fee. Id. §§ 5-117.1(i),(j).

A person whose HQL application is denied or whose HQL is revoked may request a hearing within thirty days of the

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<sup>4</sup> According to Plaintiffs, the average wait time is 27-28 days before an HQL is received. Amended Compl. [ECF No. 13] ¶ 39.

<sup>5</sup> Even if a purchaser has an HQL, he or she must wait seven days after purchasing a handgun before receiving it. Md. Code. Ann., Pub. Safety § 5-123.

revocation or denial, and the hearing will be granted within fifteen days of the request. Id. § 5-117.1(l).

B. The HQL Regulations

The FSA authorizes the Secretary of the Maryland State Police ("MSP") to adopt regulations to implement the HQL requirement. Id. § 5-117.1(n). Accordingly, the MSP has adopted regulations and practices after a notice and comment period.

The MSP regulations require an HQL application to be submitted online, and the application must include the "applicant's name, address, driver's license or photographic identification soundex number, place and date of birth, height, weight, race, sex, eye and hair color, occupation, and home and work telephone numbers" and a nonrefundable payment of \$50.00. Md. Code Regs. 29.03.01.28 (2017). Plaintiffs claim that, as a matter of practice, the MSP will accept only fingerprints taken by a State-certified vendor using "livescan" technology. The fee for fingerprinting is \$17.00. ¶<sup>6</sup> 37.

Applicants are also required to submit "a Firearms Safety Training Certificate issued by a Qualified Handgun Instructor" that "constitute[s] proof that the applicant satisfactorily completed a Firearms Safety Training Course." Md. Code Regs.

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<sup>6</sup> All ¶ references herein are to the Amended Complaint [ECF No. 13].

29.03.01.29 (2017). In addition to the statute's requirements for the course content, the regulations specify that the course must include "a practice component in which the applicant safely fires at least one round of live ammunition." Id. An applicant will have to pay any charged fee for the training course in addition to the \$50.00 application fee.

### C. The Plaintiffs

#### 1. Individual Plaintiffs

The Individual Plaintiffs are four women who reside in Maryland and are over the age of 21. They do not currently own handguns and are "deterred from purchasing a handgun because of the expense and inconvenience of the HQL application process and its constituent parts." ¶¶ 9, 14, 19, 24. But for the HQL requirement, they could lawfully purchase and own handguns.

Plaintiff Ana Sliveira is a single mother who is employed as a Department of Defense federal contractor employee. She holds a government security clearance and was a victim of the Office of Personnel Management data breach. She has heightened concern for her family's safety because her personal information has been disclosed as a result of that breach. She would like to purchase a handgun to protect herself and her family inside of her home. She does not own any other firearms.

Plaintiff Deborah Kay Miller is a General Member of

Plaintiff organization Maryland Shall Issue, Inc. Ms. Miller wants a handgun for self-defense, target practice, and other lawful purposes.

Plaintiff Susan Brancato Vizas has passed Hunter Safety Training and would like to purchase a handgun for self-defense, target practice, and other lawful purposes, but has not taken further steps to obtain an HQL because the process is burdensome. Ms. Vizas is a mother of three school-aged children.

Plaintiff Christine Bunch wants a handgun for self-defense, target practice, and other lawful purposes; however, she "cannot afford the time or excessive cost of acquiring an HQL." ¶ 24.

## 2. Plaintiffs Maryland Shall Issue

Plaintiff Maryland Shall Issue, Inc. ("MSI") is a Maryland non-profit organization "dedicated to the preservation and advancement of gun owners' rights in Maryland." ¶ 25. MSI "seeks to educate the community about the right of self-protection, the safe handling of firearms, and the responsibility that goes with carrying a firearm in public." Id. MSI claims that the HQL requirements undermine its message and objectives.

MSI brings this action on behalf of itself and its approximately 772 members. Some MSI members do not possess HQLs



and "have been deterred from purchasing a handgun because of the expense and inconvenience of the HQL application process and its constituent parts." Id.

### 3. Plaintiff Atlantic Guns

Plaintiff Atlantic Guns, Inc. ("Atlantic Guns") is a federally-licensed firearms dealer and Maryland Regulated Firearms Dealer.

Atlantic Guns is unable to sell handguns to persons without HQLs and persons who are deterred by the HQL application process. Atlantic Guns has experienced a "significant reduction in its business due to the HQL requirement." ¶ 26. Atlantic Guns also represents the interests of customers who would like to purchase handguns but cannot buy them because of the HQL requirement.

### D. Constitutional Claims

Plaintiffs contend that the HQL Provision and implementing regulations violate individuals' Second Amendment rights to purchase or acquire a handgun and the Due Process Clause of the Fourteenth Amendment.

The Plaintiffs present their federal constitutional claims pursuant to 42 U.S.C. § 1983 (2012). To establish a § 1983 claim, a plaintiff must prove that a defendant acted under color

of state law and deprived him/her of a right secured by the Constitution.

1. Color of State Law

There is no doubt that all pertinent actions of Defendants were performed under color of state law, i.e., acting as state officials.

2. Deprivation of Rights

a. Count I: Second Amendment Claims

The Second Amendment provides: "A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed." U.S. Const. amend. II. At its core, the Second Amendment protects an individual right of "law-abiding, responsible citizens to use arms in defense of hearth and home." District of Columbia v. Heller, 554 U.S. 570, 635 (2008); see also McDonald v. City of Chicago, 561 U.S. 742, 748 (2010)(holding that the Second Amendment is applicable to the States).

Although the Supreme Court has not delineated the exact scope of the Second Amendment, the Heller Court cautioned that "nothing in our opinion should be taken to cast doubt on . . . laws imposing conditions and qualifications on the commercial

sale of arms," which are "presumptively lawful."<sup>7</sup> Id. at 626-27 & n.26. The Fourth Circuit has not had the occasion to address a law requiring persons to obtain a license before possessing a handgun.

The United States Court of Appeals for the Fourth Circuit follows a two-step analysis when assessing laws regulating firearms.

The first question is "whether the challenged law imposes a burden on conduct falling within the scope of the Second Amendment's guarantee." . . . If the challenged regulation burdens conduct that was within the scope of the Second Amendment as historically understood, then we move to the second step of applying an appropriate form of means-end scrutiny.

United States v. Chester, 628 F.3d 673, 680 (4th Cir. 2010)(internal citations omitted).

At step two, the level of scrutiny applied "depends on the nature of the conduct being regulated and the degree to which the challenged law burdens the right." Id. at 682.

A severe burden on the core Second Amendment right of armed self-defense should require strong justification. But less severe burdens on the right, laws that merely regulate rather than restrict, and laws that do not implicate the central self-defense concern of the Second Amendment, may be more easily

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<sup>7</sup> Since Heller, the Fourth Circuit has upheld several gun regulations, including laws banning assault weapons, Kolbe v. Hogan, 849 F.3d 114, 161 (4th Cir. 2017), prohibiting possession of loaded firearms in a national park, United States v. Masciandaro, 638 F.3d 458, 460 (4th Cir. 2011), and requiring persons to demonstrate a "good and substantial reason" before receiving a concealed carry permit, Woollard v. Gallagher, 712 F.3d 865, 882 (4th Cir. 2013).

justified.

Id. (quoting United States v. Skoien, 587 F.3d 803, 813-14 (7th Cir. 2009)), reh'g en banc granted, opinion vacated, No. 08-3770, 2010 WL 1267262 (7th Cir. Feb. 22, 2010), and on reh'g en banc, 614 F.3d 638 (7th Cir. 2010).

Defendants do not deny that the HQL Provision and implementing regulations burden conduct within the scope of the Second Amendment, namely, the ability of a law-abiding citizen to attain a handgun for use in the home for self defense. See Heller, 554 U.S. at 629 (recognizing that the handgun is considered to be "the quintessential self-defense weapon").

However, the Defendants contend that:

1. Plaintiffs lack standing to challenge certain aspects of the HQL requirements;
2. The HQL requirements are nevertheless valid under intermediate scrutiny; and
3. Plaintiffs fail to allege facts sufficient to maintain a facial or as-applied challenge.

These assertions will be addressed in turn.

i. Standing

To have standing, an individual plaintiff must allege a concrete injury, causation, and redressability. An association has standing only when its individual members have standing in their own rights. See Lujan v. Defenders of Wildlife, 504 U.S.

555, 560 (1992); Hunt v. Wa. State Apple Adver. Comm'n, 432 U.S. 333, 343 (1977). "At the pleading stage, general factual allegations of injury resulting from the defendant's conduct may suffice, for on a motion to dismiss we 'presum[e] that general allegations embrace those specific facts that are necessary to support the claim.'" Lujan v. Defs. of Wildlife, 504 U.S. 555, 561 (1992)(quoting Lujan v. National Wildlife Federation, 497 U.S. 871, 889 (1990)).

Generally, a person may not bring a constitutional challenge to a statute on grounds that do not apply to that plaintiff. See Broadrick v. Oklahoma, 413 U.S. 601, 610 (1973) ("[C]onstitutional rights are personal and may not be asserted vicariously.").

Plaintiffs allege that the HQL Provision and regulations are "unduly burdensome, particularly for people who hunt for food, require a firearm to earn a living, are elderly, terminally ill and/or who have an urgent need for firearms for self-defense because they live in a high crime area or have been threatened." ¶ 44. Plaintiffs also allege that the MSP regulations are burdensome because they require computer and internet access, a scanner to scan and attach the supporting documentation to an HQL application, a permanent home address and phone number, and a credit or debit card to pay the fee.

Additionally, Plaintiffs allege that the MSP regulations

discriminate against and act as a barrier to "the poor or disadvantaged citizens of Maryland who live in urban areas" who lack access or means to travel to State-certified "livescan" fingerprint vendors, handgun training course instructors, or a public shooting range for live fire instruction. ¶ 46.

Defendants contend that the Plaintiffs lack standing to bring a facial or as-applied Second Amendment claim based on this alleged discrimination (other than time and cost) because none of the Plaintiffs allege that they themselves or one of their members or customers are negatively impacted by those requirements, i.e., they do not allege that there is any pertinent individual with a need to hunt for food, who lacks access to the internet or a scanner, or lives in an urban area with no access to a shooting range, etc. See Heller v. District of Columbia, 45 F. Supp. 3d 35, 71 (D.D.C. 2014) aff'd in part, rev'd in part on other grounds, Heller v. District of Columbia, 801 F.3d 264 (D.C. Cir. 2015) (determining that plaintiffs lacked standing to challenge the D.C. gun registry provision that a registrant not be blind because none of the plaintiffs were blind).

The Amended Complaint does not contain even general factual allegations that any individual Plaintiff or any member/customer of the entity Plaintiffs are affected by aspects of the Provision other than time and cost, nor do they make allegations

that would allow the Court to derive an inference that they are burdened by some of these provisions, such as the need for access to a computer, a debit card, or a fixed address.

However, MSI, a gun advocacy organization, contends that at least some of its many members across the state are affected by all of these burdens, and that it can identify specific individuals after discovery. ¶ 25 ("MSI has approximately 772 members statewide."). "[T]he Supreme Court has made it clear that 'the presence of one party with standing is sufficient to satisfy Article III's case-or-controversy requirement.'"

Bostic v. Schaefer, 760 F.3d 352, 370 (4th Cir. 2014)(quoting Rumsfeld v. Forum for Academic & Institutional Rights, Inc., 547 U.S. 47, 52 n.2, (2006)).

Taken in a light most favorable to Plaintiffs, with all inferences that can be derived from the facts alleged, it is plausible that some MSI members do hunt for their food or live in urban areas, and thus have standing as to those challenges. Ultimately, to prevail, Plaintiffs must prove the identity of specific individuals who are personally injured or deterred by each contested aspect of the challenged requirements in order to have standing. Count I shall not be dismissed for lack of standing.

ii. Standard of Scrutiny

Plaintiffs disagree with Defendants' position that intermediate scrutiny applies and assert that it is inappropriate for the Court to select and apply means-end scrutiny prior to discovery.

The facts and Statute at issue in this case are different from those previously addressed by the Fourth Circuit, thus the issue of what scrutiny should or could apply is unsettled.<sup>8</sup> For example, in Kolbe, the en banc panel held that assault weapons and large-capacity magazines are not constitutionally protected, and even if they were, only intermediate scrutiny applies because those weapons did not fall under the core protection of the Second Amendment. Kolbe, 849 F.3d at 137-38. Similarly, in Chester, the Fourth Circuit held that intermediate scrutiny applied because the defendant's claim did not implicate the core right of the Second Amendment because he was not a law-abiding citizen. 628 F.3d at 683. The Plaintiffs' claims in the instant

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<sup>8</sup> But see Wrenn v. D.C., No. 16-7025, 2017 WL 3138111, at \*11 (D.C. Cir. July 25, 2017)(noting that the Second Amendment is subject to longstanding restrictions, including licensing requirements); Kwong v. Bloomberg, 723 F.3d 160, 168 (2d Cir. 2013)(finding in review of a summary judgment motion that heightened scrutiny does not apply unless a restriction "operates as a substantial burden" on an individual's Second Amendment rights, such as a complete prohibition of handgun ownership); Heller v. D.C., 670 F.3d 1244, 1254-55, 1257 (D.C. Cir. 2011)(applying intermediate scrutiny to gun registration laws because they "are self-evidently de minimis, for they are similar to other common registration or licensing schemes").



case, however, do implicate the core right of the Second Amendment.

Even Kwong v. Bloomberg, 723 F.3d 160 (2d Cir. 2013), wherein the United States Court of Appeals for the Second Circuit applied intermediate scrutiny to a New York City handgun licensing law and a \$340.00 fee, noted that “[t]his challenge does not present us with the hypothetical situation where a plaintiff was unable to obtain a residential handgun license on account of an inability to pay the \$340 fee.” Id. at 167 n.12.

The HQL Provision and regulations do not effect an absolute ban on handguns, but, based on the facts alleged in the Amended Complaint, at least one Plaintiff, Ms. Bunch, cannot afford the fees or time necessary to get an HQL, and therefore allegedly has been prevented from owning a handgun under the FSA. ¶ 24.

The Court concludes that it is wise to have a fully developed record before weighing in on this matter of first impression. See id. at 683 (noting the importance of having evidence on the record to assess whether the government had established a substantial relationship to an important state goal); Heller v. D.C., 670 F.3d 1244, 1259 (D.C. Cir. 2011) (remanding the case to district court for further evidentiary proceedings because the parties failed to produce sufficient evidence to enable the court to apply intermediate scrutiny).

Thus, it is premature to select and apply a form of scrutiny to assess the merits of Plaintiffs' claims without giving the parties a chance to conduct discovery.<sup>9</sup> See Tobey v. Jones, 706 F.3d 379, 387 (4th Cir. 2013)(acknowledging that a Rule 12(b)(6) motion does not resolve the merits of a claim).

iii. Adequacy of As-Applied Challenge

Defendants assert that Plaintiffs do not allege facts sufficient to present a plausible claim that their Second Amendment rights have been burdened.

The Individual Plaintiffs allege that they do not have handguns and want to obtain handguns for self-defense and other lawful purposes, but are deterred by the expense and inconvenience of the HQL application process. Similarly, MSI alleges that some of its members, including Ms. Miller, want to obtain handguns but have been deterred or prevented by the HQL requirements. Atlantic Guns alleges that it suffers business losses because the HQL Provision prevents it from selling to

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<sup>9</sup> Although Defendants contend that it is appropriate for the Court to take judicial notice of certain statistics and studies, the Court concludes that it would be inappropriate to rely on those pieces of evidence, which are disputed by Plaintiffs, without providing Plaintiffs an opportunity to conduct discovery and/or contest the validity of Defendants' evidence. Cf. Giovanni Carandola, Ltd. v. Bason, 303 F.3d 507, 516 (4th Cir. 2002)(allowing a governmental entity to rely on evidentiary foundation established in other cases "unless the plaintiff produces clear and convincing evidence to the contrary").

customers who want a handgun, which in turn, burdens the Second Amendment rights of its customers.<sup>10</sup>

The Amended Complaint details the burdens associated with the application process, including the specific costs<sup>11</sup> and the 27 or more days of wait time to receive an HQL. It is not necessary for a Plaintiff to explain why she specifically lacks the resources to pay for the application. Common-sense allows an inference that a person could be burdened in some capacity by the HQL application process, which could cost hundreds of dollars, requires at least four hours of training time, plus time spent on completing forms and getting fingerprints, and many days of wait time. These allegations are sufficient to plead a Second Amendment claim. The extent of the burden is relevant to the analysis on the merits.

Accepting the pleadings as true, the Court finds that the Plaintiffs allege adequate facts to present a plausible claim that the HQL Provision and regulations have deprived them (or their members or customers) of the Second Amendment right to possess a handgun in the home for self-defense. Accordingly, Count I shall not be dismissed.

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<sup>10</sup> See Craig v. Boren, 429 U.S. 190, 195 (1976)("[V]endors and those in like positions have been uniformly permitted to resist efforts at restricting their operations by acting as advocates of the rights of third parties who seek access to their market or function.").

<sup>11</sup> At least \$99.50, plus whatever is charged for a training course.

iv. Facial Challenge

"As the Supreme Court has repeatedly observed, [a] facial challenge to a legislative Act is, of course, the most difficult to mount successfully, since the challenger must establish that no set of circumstances exists under which the Act would be valid. The fact the [relevant statute] might operate unconstitutionally under some conceivable set of circumstances is insufficient to render it wholly invalid . . . ." Jordan by Jordan v. Jackson, 15 F.3d 333, 343 (4th Cir. 1994)(quoting United States v. Salerno, 481 U.S. 739, 745 (1987)).

An exception relating to third party rights exists in the First Amendment context for overbreadth claims, but no circuit has accepted such a Second Amendment overbreadth challenge. United States v. Chester, 514 F. App'x 393, 395 (4th Cir. 2013); United States v. Masciandaro, 638 F.3d 458, 474 (4th Cir. 2011)(calling a Second Amendment overbreadth challenge a "novel notion," but declining to reach the issue).

Plaintiffs contend that the HQL Provision and regulations are facially unconstitutional because they were intended to act "as a rationing of Second Amendment rights by discouraging and burdening the exercise of a law-abiding citizen's right to purchase or acquire a handgun," and thus the Provision is illegitimate and unconstitutional. ¶ 57. In addition, Plaintiffs contend that the HQL requirements are facially

unconstitutional because they bar a person from exercising the Second Amendment right until or unless that person has "borne all the burdens imposed by the HQL Statute and navigated all the obstacles." Pls.' Opp'n [ECF No. 29] at 17.

Defendants assert that the Amended Complaint fails to present a facial challenge because the HQL Provision has a legitimate sweep and because Plaintiffs either do not have standing or have not alleged facts to support a claim that the individual burdens, such as cost or access to a shooting range, impose an unconstitutional burden in every circumstance.

The Court has already addressed the standing issue, and concludes that if it is later determined that the law is constitutional as-applied to Plaintiffs, at that point it will be unnecessary to address the facial challenges. See United States v. Masciandaro, 638 F.3d 458, 474 (4th Cir. 2011) ("[W]e conclude that a person, . . . to whom a statute was constitutionally applied, 'will not be heard to challenge that statute on the ground that it may conceivably be applied unconstitutionally to others, in other situations not before the Court.'") (quoting Broadrick, 413 U.S. at 610); see also Woollard v. Gallagher, 712 F.3d 865, 882-83 (4th Cir. 2013).

Accordingly, the claims in Count I remain pending.

b. Count II: Fourteenth Amendment Due Process  
Claims

Plaintiffs allege that the HQL requirement violates the Fourteenth Amendment Due Process Clause<sup>12</sup> in two ways:

(1) the MSP regulations vest "Qualified Handgun Instructors" with unreviewable authority to grant or deny an individual the certification needed to apply for an HQL, and

(2) the terms "receive" or "receipt" used in the HQL Provision are void for vagueness.

These contentions will be addressed in turn.

i. Instructor Certification Requirement

The MSP regulations provide that an HQL applicant must submit "a Firearms Safety Training Certificate issued by a Qualified Handgun Instructor" to prove that the applicant "satisfactorily completed a Firearms Safety Training Course." Md. Code Regs. 29.03.01.29 (2017). Plaintiffs' claims are based on the possibility that an Instructor could refuse to issue such a certificate, thereby preventing an applicant from successfully completing the application and being considered to receive an HQL. The statute and the regulations do not provide for a hearing or judicial review of an Instructor's denial of a Certificate.

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<sup>12</sup> "[N]or shall any state deprive any person of life, liberty, or property, without due process of law." U.S. Const. amend. XIV, § 1.

To state a procedural due process claim, Plaintiffs must show that:

- (1) they had a constitutionally cognizable life, liberty, or property interest;
- (2) the deprivation of that interest was caused by some form of state action; and
- (3) the procedures employed were constitutionally inadequate.

See Sansotta v. Town of Nags Head, 724 F.3d 533, 540 (4th Cir. 2013).

Plaintiffs' procedural due process claims are speculative and fail to meet this standard because they do not allege a deprivation due to the denial of a Training Certificate.<sup>13</sup> Plaintiffs are not harmed by merely complying with the regulation, and would be harmed only if an Instructor wrongfully denied a Certificate.<sup>14</sup> Nor have Plaintiffs pointed to any part of the regulations that vest Training Instructors with a discretionary determination.

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<sup>13</sup> In this way, Plaintiffs' claims are also not ripe. See Andrew v. Lohr, 445 F. App'x 714, 715 (4th Cir. 2011)(finding case "not fit for review" when the constitutional violation rested on contingent future events and plaintiff had not demonstrated any present hardship).

<sup>14</sup> At which point a person could possibly have a valid claim. See State of Washington ex rel. Seattle Title Trust Co. v. Roberge, 278 U.S. 116, 121-22 (1928)(finding a due process violation when private citizens were delegated authority to control the use of a landowner's property for any reason without being subject to official review).

Accordingly, Plaintiffs have failed to plausibly allege that the Instructor Certification Requirement violates procedural due process.

ii. Vagueness Challenge

The HQL Provision provides that a person may not "purchase, rent, or receive a handgun" without an HQL. Md. Code Ann., Pub. Safety § 5-117.1(c). Section 5-144(a) of the Maryland Public Safety Code prohibits the "receipt of a regulated firearm in violation of this subtitle." Md. Code Ann., Pub. Safety § 5-144(a)(2011 Repl. Vol., 2016 Supp.). Plaintiffs assert that the HQL Provision is void for vagueness because the terms "receive" and "receipt" are undefined by the Code and regulations.

MSI submitted comments to the MSP during the rulemaking proceedings and requested that the MSP define those terms, but the MSP failed to do so. MSI contends that its members without HQLs who wish to temporarily handle a handgun at home or a shooting range or to receive training are exposed to the threat of arbitrary prosecution under § 5-144 due to the ambiguous meaning of the terms "receive" and "receipt."

A statute is impermissibly vague under the Due Process Clause only if it "[1] fails to provide a person of ordinary intelligence fair notice of what is prohibited, or [2] is so standardless that it authorizes or encourages seriously



discriminatory enforcement.” United States v. Passaro, 577 F.3d 207, 217 (4th Cir. 2009)(quoting United States v. Williams, 553 U.S. 285 (2008)). Although “the standard of certainty is higher” for criminal statutes, “[s]triking down ordinances . . . as facially void for vagueness is a disfavored judicial exercise.” Schleifer by Schleifer v. City of Charlottesville, 159 F.3d 843, 853 (4th Cir. 1998)(quoting Kolender v. Lawson, 461 U.S. 352, 359 n.8 (1983)). “In evaluating a facial challenge to a state law, a federal court must, of course, consider any limiting construction that a state court or enforcement agency has proffered.” Vill. of Hoffman Estates v. Flipside, Hoffman Estates, Inc., 455 U.S. 489, 495 n.5 (1982).

Defendants contend that the words “receive” and “receipt” are not vague in light of the structure of the statute, which pairs “transfer” in § 5-117.1 subsection (b), with “receive” in subsection (c). The Maryland Court of Appeals has defined the word “transfer” as used in § 5-124 of the Maryland Public Safety Article, to refer only to “permanent gratuitous transfers,” Chow v. State, 903 A.2d 388, 401-02 (Md. 2006); thus, Defendants argue that “receipt” means a permanent receipt of a firearm.

To address Defendants’ arguments, the Court would have to analyze the merits of Plaintiffs’ vagueness claim, which is inadvisable and unnecessary at the motion to dismiss stage.

It suffices now to note that Plaintiffs adequately allege a plausible claim that the HQL Provision is impermissibly vague<sup>15</sup> and thus deprives them of due process under the Fourteenth Amendment. Specifically, MSI alleges that its members routinely handle handguns in the presence of other people who do not possess HQLs, yet who wish to temporarily possess the handgun for training or shooting, or MSI members are not certain of what the law forbids regarding temporary possession of a handgun by nonlicensed guests in their homes.

Accordingly, Count II shall not be dismissed.

E. Count III: Ultra Vires Claim

In Count III, Plaintiffs bring a claim under the Maryland Administrative Procedure Act, which provides that "[a] person may file a petition for a declaratory judgment on the validity of any regulation" and "the court shall declare a provision of a regulation invalid if the court finds that:

(1) the provision violates any provision of the United States or Maryland Constitution;

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<sup>15</sup> The Court does not read the Amended Complaint to present a facial vagueness challenge. See McCree v. State, 76 A.3d 400, 409 (Md. Ct. App. 2013), aff'd, 105 A.3d 456 (Md. 2014) (noting that "we normally do not evaluate whether the statute is of questionable applicability in foreseeable marginal situations" unless "the statute appears to impinge upon fundamental constitutional rights such as the First Amendment guarantees of free speech" (internal citations omitted)).

(2) the provision exceeds the statutory authority of the unit; or

(3) the unit failed to comply with statutory requirements for adoption of the provision."

Md. Code Ann., State Gov't § 10-125(a),(d). An agency's rules or regulations should be upheld "as long as they d[o] not contradict the language or purpose of the statute." Christ by Christ v. Maryland Dep't of Nat. Res., 644 A.2d 34, 39 (Md. 1994).

Plaintiffs contend that the MSP regulations are invalid because MSP:

- imposed requirements<sup>16</sup> for the application process beyond what was specified by § 5-117.1;
- acted arbitrarily and unreasonably in failing to approve alternative handgun training courses as contemplated by § 5-117.1(e)(1); and
- "impermissibly shifted the burden of paying for the required training to the applicant" by not including the training and fingerprinting fees in the \$50 fee limitation in § 5-117.1(g)(2). ¶ 86.

Plaintiffs also allege that the regulations violate the Second Amendment.

The Maryland Court of Appeals has held "[i]t is proper to dismiss a declaratory judgment action only where there is a lack of jurisdiction or where a declaratory judgment is not an

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<sup>16</sup> Such as the live fire training requirement, requiring applications to be submitted online, requiring training by a private State-certified instructor and not providing training by the MSP, not providing fingerprinting at the MSP, and requiring payments to be made by credit or debit card. See ¶ 80.

available or appropriate type of remedy." Christ by Christ, 644 A.2d at 37. When considering a motion to dismiss a claim under Maryland's declaratory judgment statute,

"it is immaterial that the ultimate ruling may be unfavorable to the plaintiff. The test of the sufficiency of the [complaint] is not whether it shows that the plaintiff is entitled to the declaration of rights or interest in accordance with his theory, but whether he is entitled to a declaration at all; so, even though the plaintiff may be on the losing side of the dispute, if he states the existence of a controversy which should be settled, he states a cause of suit for a declaratory decree."

Id. at 38 (quoting Shapiro v. County Comm., 149 A.2d 396, 399 (Md. 1959)). Therefore, Plaintiffs have adequately pled an ultra vires claim under § 10-125.<sup>17</sup>

Accordingly, Count III shall not be dismissed.

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<sup>17</sup> In their Opposition Memorandum, Plaintiffs contend that this Court can also set aside MSP's actions as "arbitrary and capricious" under the common law and Md. Code Ann., State Gov't § 10-222. However, § 10-222 governs judicial review of a decision in a "contested case," not the promulgation of a regulation. And the scope of a court's inherent authority to review an agency's quasi-legislative actions, which is the type of action involved here, is "limited to 'assessing whether the agency was acting within its legal boundaries.'" See Maryland Bd. of Pub. Works v. K. Hovnanian's Four Seasons at Kent Island, LLC, 42 A.3d 40, 58 n.15 (Md. 2012)(quoting Schade v. Board of Elections, 930 A.2d 304, 326 (Md. 2007)).

V. CONCLUSION

For the foregoing reasons:

1. Defendants' Motion to Dismiss the Amended Complaint [ECF No. 18] is GRANTED in part and DENIED in part.

a. Counts I and III remain pending.

b. As to Count II:

i. The challenge to the Instructor Certification Requirement is DISMISSED.

ii. The void for vagueness challenge remains pending.

SO ORDERED, on Tuesday, September 05, 2017.

\_\_\_\_\_/s/\_\_\_\_\_  
Marvin J. Garbis  
United States District Judge

UNITED STATES DISTRICT COURT  
DISTRICT OF MARYLANDCHAMBERS OF  
J. MARK COULSON  
UNITED STATES MAGISTRATE JUDGE101 WEST LOMBARD STREET  
BALTIMORE, MARYLAND 21201  
Phone: (410) 962-4953  
Fax: (410) 962-2985

April 20, 2018

## LETTER TO ALL COUNSEL OF RECORD

Re: *Maryland Shall Issue, Inc. et al v. Hogan et al*  
Civil No. 1:16-cv-03311-MJG

Dear Counsel:

This case was brought as a challenge to Maryland's firearms legislation, Md. Code Ann., Public Safety § 5-117 *et seq.*, regarding Handgun Qualification Licenses ("HQL"). (ECF No. 1, Compl.). Plaintiffs seek to "relieve the Maryland taxpayer of the burden of an unnecessary and expensive process and to restore to Maryland residents their constitutional right to purchase a handgun." *Id.* at ¶ 4. It has been referred to me for resolution of all discovery and related scheduling matters pursuant to 28 U.S.C. § 636 and Local Rules 301 and 302. (ECF No. 43). The Court now has before it Plaintiff Atlantic Guns, Inc.'s Motion to Compel Defendant William M. Pallozzi (in his capacity as Superintendent of the Maryland State Police) to produce certain discovery material. (ECF No. 53). The Court has also reviewed Defendant's Response in Opposition, Plaintiff's Reply in Support, and Plaintiff's Supplemental Reply. *Id.* No hearing is necessary. Loc. R. 105.6 (D. Md. 2016). For the reasons stated herein, Plaintiff's Motion to Compel is GRANTED.

As a result of the parties' multiple attempts to resolve their discovery disputes prior to filing the Motion to Compel (for which the Court commends them) and relevant response and replies with the Court, there remains only one discovery dispute for the Court's disposition. The remaining dispute is over Plaintiff's Interrogatory 5, which requests identification of "the number of HQL applications not completed each year from 2013 through 2017." (ECF No. 53-1 at 3). Defendant objects to the request and claims that the number of incomplete HQL applications is neither reliable nor relevant for two reasons.<sup>1</sup> First, Defendant argues that an individual who began but did not complete an application could have done so for a "number of reasons": the individual may still intend to submit the pending application in the future; the individual may have begun one type of application and subsequently decided to submit a different type of application instead; the individual opened multiple accounts due to forgotten usernames/passwords; or the incomplete application may be an example of "[Maryland State Police] personnel set[ting] up fabricated accounts to test the system." (ECF No. 53-2 at 5). Second, Defendant states that "this raw data would not indicate why an application was initiated but not submitted as final" and thus "is not relevant to Plaintiffs' claims in this case that the HQL application process is burdensome."

There is no doubt that Defendant has several valid arguments that could undermine Plaintiff's assertion that "completion percentage" is strong proof of the administrative burden of the HQL application process. However, notwithstanding that a factfinder might conclude that such information should be given little weight or that a trial judge in his or her role as gatekeeper might decide it is not reliable or probative enough for admission into evidence, it nonetheless has *some* weight. Just as a failure to complete might be due to a lost password, it might also be due to frustration or fatigue related to the process causing the applicant to abandon it altogether. At the discovery stage, in the absence of demonstrated burden, relevance, not ultimate admissibility at trial, is the touchstone of the inquiry. *See* Fed. R. Civ. P. 26(b)(1) ("[T]he scope of discovery is as follows: Parties may obtain discovery regarding any nonprivileged matter that is

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<sup>1</sup> Defendant had also objected that the interrogatory was "overly-broad and unduly burdensome," however Defendant offers no specific information relating to the alleged burden from which the Court could assess any burden and balance it against the importance of the information for Plaintiff's case.

relevant to any party's claim or defense and proportional to the needs of the case . . ."). Whether such information is ultimately reliable or probative enough for admission into evidence at trial is a matter for the trial judge. Accordingly, Plaintiff's Motion to Compel, (ECF No. 53), is GRANTED and Defendant is to provide the relevant discovery in due course.

Despite the informal nature of this letter, it is an Order of the Court and will be docketed as such.

Sincerely yours,

/s/

J. Mark Coulson  
United States Magistrate Judge

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**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND**

MARYLAND SHALL ISSUE, INC., *et al.*, \*

*Plaintiffs,* \*

v. \* No. 1:16-cv-03311-ELH

LAWRENCE HOGAN, *et al.* \*

*Defendants.* \*

\* \* \* \* \*

**DEFENDANTS' MOTION FOR SUMMARY JUDGMENT**

Defendants Governor Lawrence J. Hogan, Jr. and Superintendent of State Police Colonel Woodrow W. Jones, III, both sued in their official capacities, hereby move, pursuant to Rule 56 of the Federal Rules of Civil Procedure, for summary judgment on all claims in the amended complaint. The grounds for this motion are set for the memorandum of law filed herewith and incorporated by reference herein.

WHEREFORE, for the reasons stated herein, defendants respectfully request that the Court enter summary judgment in favor of defendants on all claims in the amended complaint.



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Respectfully Submitted,

BRIAN E. FROSH  
Attorney General

/s/ Ryan R. Dietrich  
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Dated: November 25, 2020

Attorneys for Defendants

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## **EXHIBIT 2**

## **Annotated Code of Maryland, Public Safety Article**

### **§ 5-117.1. Handgun qualification license required to sell, rent, or transfer handguns**

#### **Application of section**

(a) This section does not apply to:

(1) a licensed firearms manufacturer;

(2) a law enforcement officer or person who is retired in good standing from service with a law enforcement agency of the United States, the State, or a local law enforcement agency of the State;

(3) a member or retired member of the armed forces of the United States or the National Guard; or

(4) a person purchasing, renting, or receiving an antique, curio, or relic firearm, as defined in federal law or in determinations published by the Bureau of Alcohol, Tobacco, Firearms and Explosives.

#### **Handgun qualification license required for purchaser, lessee, or transferees**

(b) A dealer or any other person may not sell, rent, or transfer a handgun to a purchaser, lessee, or transferee unless the purchaser, lessee, or transferee presents to the dealer or other person a valid handgun qualification license issued to the purchaser, lessee, or transferee by the Secretary under this section.

#### **Requirements for purchase, rent, or receipt of handguns**

(c) A person may purchase, rent, or receive a handgun only if the person:

(1)(i) possesses a valid handgun qualification license issued to the person by the Secretary in accordance with this section;

(ii) possesses valid credentials from a law enforcement agency or retirement credentials from a law enforcement agency;

(iii) is an active or retired member of the armed forces of the United States or the National Guard and possesses a valid military identification card; or

(iv) is purchasing, renting, or receiving an antique, curio, or relic firearm, as defined in federal law or in determinations published by the Bureau of Alcohol, Tobacco, Firearms and Explosives; and

(2) is not otherwise prohibited from purchasing or possessing a handgun under State or federal law.

#### **Issuance of handgun qualification license**

(d) Subject to subsections (f) and (g) of this section, the Secretary shall issue a handgun qualification license to a person who the Secretary finds:

(1) is at least 21 years old;

(2) is a resident of the State;

(3) except as provided in subsection (e) of this section, has demonstrated satisfactory completion, within 3 years prior to the submission of the application, of a firearms safety training course approved by the Secretary that includes:

(i) a minimum of 4 hours of instruction by a qualified handgun instructor;

(ii) classroom instruction on:

1. State firearm law;

2. home firearm safety; and

3. handgun mechanisms and operation; and

(iii) a firearms orientation component that demonstrates the person's safe operation and handling of a firearm; and

(4) based on an investigation, is not prohibited by federal or State law from purchasing or possessing a handgun.

#### **Exemptions from firearms safety training course requirements**

(e) An applicant for a handgun qualification license is not required to complete a firearms safety training course under subsection (d) of this section if the applicant:

(1) has completed a certified firearms training course approved by the Secretary;

(2) has completed a course of instruction in competency and safety in the handling of firearms prescribed by the Department of Natural Resources under § 10-301.1 of the Natural Resources Article;

(3) is a qualified handgun instructor;

(4) is an honorably discharged member of the armed forces of the United States or the National Guard;

(5) is an employee of an armored car company and has a permit issued under Title 5, Subtitle 3 of the Public Safety Article; or

(6) lawfully owns a regulated firearm.

#### **Applications to Central Repository for State and national criminal history records check**

(f)(1) In this subsection, "Central Repository" means the Criminal Justice Information System Central Repository of the Department of Public Safety and Correctional Services.

(2) The Secretary shall apply to the Central Repository for a State and national criminal history records check for each applicant for a handgun qualification license.

(3) As part of the application for a criminal history records check, the Secretary shall submit to the Central Repository:

(i) a complete set of the applicant's legible fingerprints taken in a format approved by the Director of the Central Repository and the Director of the Federal Bureau of Investigation;

(ii) the fee authorized under § 10-221(b)(7) of the Criminal Procedure Article for access to Maryland criminal history records; and

(iii) the mandatory processing fee required by the Federal Bureau of Investigation for a national criminal history records check.

(4) The Central Repository shall provide a receipt to the applicant for the fees paid in accordance with paragraph (3)(ii) and (iii) of this subsection.

(5) In accordance with §§ 10-201 through 10-234 of the Criminal Procedure Article, the Central Repository shall forward to the applicant and the Secretary a printed statement of the applicant's criminal history information.

(6) Information obtained from the Central Repository under this section:

(i) is confidential and may not be disseminated; and

(ii) shall be used only for the licensing purpose authorized by this section.

(7) If criminal history record information is reported to the Central Repository after the date of the initial criminal history records check, the Central Repository shall provide to the Department of State Police Licensing Division a revised printed statement of the applicant's or licensee's State criminal history record.

**Application form and fee**

(g) An applicant for a handgun qualification license shall submit to the Secretary:

(1) an application in the manner and format designated by the Secretary;

(2) a nonrefundable application fee to cover the costs to administer the program of up to \$50;

(3)(i) proof of satisfactory completion of:

1. a firearms safety training course approved by the Secretary; or

2. a course of instruction in competency and safety in the handling of firearms prescribed by the Department of Natural Resources under § 10-301.1 of the Natural Resources Article; or

(ii) a valid firearms instructor certification;

(4) any other identifying information or documentation required by the Secretary;  
and

(5) a statement made by the applicant under the penalty of perjury that the applicant is not prohibited under federal or State law from possessing a handgun.

**Issuance or denial of handgun qualification license**

(h)(1) Within 30 days after receiving a properly completed application, the Secretary shall issue to the applicant:

- (i) a handgun qualification license if the applicant is approved; or
- (ii) a written denial of the application that contains:
  - 1. the reason the application was denied; and
  - 2. a statement of the applicant's appeal rights under subsection (l) of this section.

(2)(i) An individual whose fingerprints have been submitted to the Central Repository, and whose application has been denied, may request that the record of the fingerprints be expunged by obliteration.

(ii) Proceedings to expunge a record under this paragraph shall be conducted in accordance with § 10-105 of the Criminal Procedure Article.

(iii) On receipt of an order to expunge a fingerprint record, the Central Repository shall expunge by obliteration the fingerprints submitted as part of the application process.

(iv) An individual may not be charged a fee for the expungement of a fingerprint record in accordance with this paragraph.

**Expiration of license**

(i) A handgun qualification license issued under this section expires 10 years from the date of issuance.

**Renewal of license**

(j)(1) The handgun qualification license may be renewed for successive periods of 10 years each if, at the time of an application for renewal, the applicant:

- (i) possesses the qualifications for the issuance of the handgun qualification license; and
- (ii) submits a nonrefundable application fee to cover the costs to administer the program up to \$20.

(2) An applicant renewing a handgun qualification license under this subsection is not required to:

- (i) complete the firearms safety training course required in subsection (d)(3) of this section; or
- (ii) submit to a State and national criminal history records check as required in subsection (f) of this section.

### **Revocation of license**

(k)(1) The Secretary may revoke a handgun qualification license issued or renewed under this section on a finding that the licensee no longer satisfies the qualifications set forth in subsection (d) of this section.

(2) A person holding a handgun qualification license that has been revoked by the Secretary shall return the license to the Secretary within 5 days after receipt of the notice of revocation.

### **Hearing upon denial or revocation of license**

(l)(1) A person whose original or renewal application for a handgun qualification license is denied or whose handgun qualification license is revoked, may submit a written request to the Secretary for a hearing within 30 days after the date the written notice of the denial or revocation was sent to the aggrieved person.

(2) A hearing under this section shall be granted by the Secretary within 15 days after the request.

(3) A hearing and any subsequent proceedings of judicial review under this section shall be conducted in accordance with Title 10, Subtitle 2 of the State Government Article.

(4) A hearing under this section shall be held in the county of the legal residence of the aggrieved person.

### **Lost or stolen licenses**

(m)(1) If an original or renewal handgun qualification license is lost or stolen, a person may submit a written request to the Secretary for a replacement license.

(2) Unless the applicant is otherwise disqualified, the Secretary shall issue a replacement handgun qualification license on receipt of a written request and a nonrefundable fee to cover the cost of replacement up to \$20.

### **Regulations**

(n) The Secretary may adopt regulations to carry out the provisions of this section.

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# **EXHIBIT 3**



**Testimony in Support of HB 294 – Firearm Safety Act of 2013**  
**Maryland House Judiciary Committee**  
**Maryland House Health and Government Operations Committee**

**Daniel W. Webster, ScD, MPH**  
**Professor and Director**  
**Johns Hopkins Center for Gun Policy and Research\***

Thank you, Chairmen Hammen & Vallario, and members of the committees, for allowing me to testify in support of House Bill 294, Firearm Safety Act of 2013. I am a professor with tenure at the Johns Hopkins University where I direct the Johns Hopkins Center for Gun Policy and Research. However, my testimony is offered by me individually, and does not represent the official position of the Johns Hopkins University. I have led numerous studies of gun violence and policies to prevent it for the past 23 years.

The proposed Firearm Safety Act of 2013 has several important provisions. I will focus most of my testimony on the provision to create a licensing system for purchasers of regulated firearms, but will also touch upon provisions to reduce ammunition capacity limits from more than 20 to more than 10 rounds, and require the reporting of events which trigger disqualification from legal firearm ownership on the basis of assessments of individuals' mental status and dangerousness to others.

Arguably, the most important objective of a state's gun laws is to prevent dangerous individuals from possessing firearms. Although Maryland has some useful laws to accomplish this task, the system is especially vulnerable to illegal straw purchases and individuals using false identification in their applications to purchase regulated firearms. A study conducted by the United States Government Accounting Office conducted tests on a random sample of gun stores and pawn shops listed in the yellow pages of local telephone directories in five states – Virginia, West Virginia, Montana, New Mexico, and Arizona – to determine the ease of using bogus identification cards (e.g., driver's licenses) to purchase firearms from licensed firearm dealers. All five states conform to minimum requirements of the Brady Act, relying on instant background checks, but do not require fingerprinting or waiting periods for firearms purchases. In none of the attempts to purchase firearms with a fake ID card did a gun dealer or employee of the gun shop question the validity of the ID card or fail to make the transaction. Based on their investigation, the GAO concluded that in the five states, "the instant background check does not positively identify purchasers of firearms," and that it "cannot ensure that the prospective purchaser is not a felon."

Although the GAO study did not investigate this, the casual scrutiny given to firearm sales applications suggest that the system could also be vulnerable to other deceptive practices of criminals and straw purchasers. For example, prospective purchasers could more easily put inaccurate information on their application forms such as using a slightly different spelling of a name or misrepresentation of a date of birth in order to avoid a denial of the application. Systems requiring firearm purchase applications be processed directly by law enforcement agencies – which I assume would be the case when the Secretary writes regulations to implement the statute – would result in fewer false applications for firearm purchases being processed and fewer guns in the wrong hands.

Thus, in addition to serving as a deterrent for illegal straw purchases, permit-to-purchase licensing and registration firearms laws could mitigate the potential negative consequences of negligent sales practices by gun dealers with more careful practices in screening firearms purchasers. A relatively small portion of gun

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\* Title and affiliation provided for identification purposes only. The opinions expressed are those of Dr. Webster and do not reflect any formal position for Johns Hopkins University.

dealers sell the majority of guns recovered by police from criminals and crime scenes (ATF, 2000). The wide disparity between licensed dealers and the number of guns that they sell that are later linked to crime is not fully explained by differences in sales volume, customer demographics, or even local crime rates (Wintemute, Cook & Wright, 2005). Undercover stings of licensed gun dealers conducted or instigated by the cities of Chicago, Detroit, and New York indicated that many were susceptible to facilitating illegal straw sales (Webster et al., 2006; Webster and Vernick, 2013). Federal investigations of gun trafficking indicate that straw purchasers and corrupt licensed dealers represent the most prominent channels for guns into the illegal market (Bureau of Alcohol, Tobacco and Firearms, 2000). Federal firearms sales laws have several weaknesses which make it difficult to curtail illegal straw purchases (Braga and Gagliardi, 2013; Vernick & Webster, 2013). For example, there is no specific statute making straw purchases illegal. When such cases are prosecuted, prosecutors usually must prove that the purchaser knowingly lied on the firearm sales application when certifying that the gun was not being purchased for someone else. Proving such intent at the point of retail sale can be very difficult.

Five states (Connecticut, Iowa, Massachusetts, New Jersey, and New York) and the District of Columbia require persons wishing to purchase handguns apply directly with a law enforcement agency and be photographed and fingerprinted. Missouri had such a system in place; however, the law was repealed on August 28, 2007. In a study which I led to assess the effects of the repeal of Missouri's permit-to-purchase licensing law, we used annual state-level data on crime guns recovered by police in Missouri and traced by the ATF during the period 2002 – 2011 to examine changes in a commonly-used indicator of illegal gun diversion, the number and proportion of guns with short sale-to-crime intervals – before and after the state repealed the law.

Immediately following the repeal of Missouri's permit-to-purchase licensing law, the share of guns recovered by Missouri police agencies that had an unusually short time interval from retail sale to crime indicative of trafficking more than doubled. Importantly, the sharp increase in short time-to-crime guns coincided with the length of time between the repeal of the law and a crime gun's recovery by police as depicted in Table 1 below. Crime guns with a sale-to-crime interval of less than three months increased from a pre-repeal stable mean of 2.9 percent to 4.5 percent in 2007 when the repeal was in effect for only four months, and then increased further to a mean of 8.4 percent for 2008 through 2011. Crime guns with sale-to-crime intervals of 3-12 months increased sharply beginning in 2008 from a pre-repeal mean of 5.9 percent to 13.9 percent for 2008-2011 when all such guns were purchased after the law's repeal. Following this same pattern of increases in the proportion of crime guns sold following the repeal of Missouri's permit-to-purchase law, the percentage of crime guns recovered one to two years after retail sale increase beginning in 2009 from a mean of 6.4 percent to 12.8 percent during 2009-2011. The sharp increase in very short sale-to-crime intervals for guns in Missouri cannot be explained away as being part of a national trend toward shorter time-to-crime guns. In fact, it is in direct conflict with national trends; the average sale-to-crime interval for the U.S. increased from 10.2 years in 2006 to 11.2 years in 2011.

My colleagues and I are beginning a study of the effects of Missouri's repeal of its permit-to-purchase licensing system on violent crime. Preliminary evidence suggests that the increase in the diversion of guns to criminals linked to the law's repeal may have translated into increases in homicides committed with firearms. From 1999 through 2007, Missouri's age-adjusted homicide rate fluctuated around a mean of 4.66 per 100,000 population per year then increased to a mean rate of 5.82 for the years 2008-2010, an increase of 25%. This increase was out of synch with changes in age-adjusted homicide rates nationally which decreased 10%<sup>†</sup> and with other states in the Midwest

<sup>†</sup> Annual age-adjusted firearm homicide rates in the U.S. averaged 4.03 during 1999-2007 and 3.81 for 2008-2010.

which declined by 5%.<sup>†</sup> States that currently have permit-to-purchase licensing requiring prospective purchasers to apply directly with a law enforcement agency have some of the lowest age-adjusted firearm mortality rates per 100,000 population in the nation for the period 2006-2010 – Connecticut 5.1, Iowa 6.3, Massachusetts 3.5, New Jersey 5.2, and New York 5.0 – compared with the overall rate for the nation of 9.5 (Centers for Disease Control and Prevention, 2013).

Table 1. Percentage of Missouri crime guns with short time intervals between retail sale and recovery by police for years 2002 – 2011.				
Year	up to 3 months	3-12 months	1-2 years	First sold in Missouri
2002	2.9%	5.2%	5.2%	54.9%
2003	3.2%	5.3%	6.1%	55.9%
2004	2.1%	5.6%	5.7%	55.6%
2005	3.3%	5.1%	6.6%	55.0%
2006	3.2%	7.5%	7.2%	56.4%
2007	4.5%	7.9%	7.1%	57.5%
2008	9.4%	12.6%	6.7%	62.5%
2009	8.1%	15.0%	12.7%	65.9%
2010	7.6%	13.7%	13.0%	67.8%
2011	8.5%	14.3%	12.7%	70.8%

States with stricter gun sales laws tend to attract guns originating in states with weaker gun laws, resulting in proportionately fewer crime guns being sold by in-state gun dealers (Cook & Braga, 2003; Webster, Vernick, & Hepburn, 2001). This is likely to be due to a relative scarcity of guns to criminals in states with more comprehensive gun sales regulations which drives up the price and attracts suppliers from states with weaker gun laws. As can be seen in the last column in Table 1, following the repeal of Missouri's purchase permit law requiring handgun purchasers to obtain licenses from local sheriff's who would photograph and fingerprint applicants, the percentage of crime guns that had been sold by in-state gun dealers increases from 55.6 percent when the law was in place to 70.8 percent by 2011. This is a significant change for an indicator that tends to change very little over time in most states.

In a prior study that I led which used crime gun trace data for 25 U.S. cities compared the percentage of crime guns that were originally sold by a licensed retail gun seller inside the state versus outside the state was significantly lower in the cities located in states with permit-to-purchase licensing and handgun registration (33.7%), the same firearm sales regulations used by the District of Columbia, than in states with that had neither of those laws (84.2%). One of the cities with permit-to-purchase licensing and handgun registration (Detroit, MI), had a higher percentage of its crime guns originating from within state (47.5%) than the average in the other cities (22.8%), and Michigan did not require purchase applicants to be fingerprinted and photographed by law enforcement agencies. Little of this gross discrepancy between cities in states with purchase licensing and registration made directly at a law enforcement agencies could be explained by potential confounders (out-of-state population living in within close proximity, out-of-state

<sup>†</sup> Firearm homicide rates in states in the Midwest other than Missouri averaged 3.52 during 1999-2007 and 3.33 for 2008-2010.

population living in close proximity with weak gun laws, migration from other states, and percentage of guns recovered in drug crimes). Controlling for the prevalence of gun ownership in the state did reduce the effect of having permit-to-purchase licensing and registration; but the effect remained very strong and highly significant. Further, the proportion of crime guns coming from within the state was correlated with another indicator of criminal gun availability – the percentage of homicides committed with firearms (Webster, Vernick, and Hepburn, 2001).

A subsequent study that I led which used crime gun trace data from 53 U.S. cities for the years 2000-2002 examined the association between state gun sales regulations and the diversion of guns to criminals (Webster et al., 2009). Discretionary permit-to-purchase licensing was independently associated with lower levels of diversion of guns sold by in-state dealers.

More recently, I led a study which examined cross-sectional associations between a number of state gun sales laws and the per capita rate at which states export guns to criminals across state lines across the 48 contiguous U.S. states. Three variations of permit-to-purchase licensing laws were examined – 1) discretionary PTP laws which give law enforcement the discretion to refuse to issue permits as well as fingerprinting of applicants by law enforcement agencies; 2) PTP with fingerprinting which require applicants to appear at the law enforcement agency issuing the permits to be photographed and fingerprinted; and 3) non-discretionary PTP laws which require a permit to purchase a firearm but do not require applicants to go to agencies to be fingerprinted. Our analyses controlled for key confounders including the prevalence of gun ownership, out-of-state population migration, the number of people living near the border of states with strong gun laws, and whether a state bordered Mexico or Canada. Data on crime gun exports were obtained from the 2009 state-level crime gun trace data posted on the ATF's website. The three states that exported the fewest crime guns per capita were New York (2.7 per 100,000 population), New Jersey (2.8), and Massachusetts (3.7) had handgun registries and permit-to-purchase licensing. Data from the regression analysis found statistically significant lower per capita export of crime guns across state borders for discretionary PTP laws (lowered rate of exporting crime guns by 76% compared with states that did not have these laws) and non-discretionary PTP laws requiring fingerprinting at a law enforcement agency (lowered crime gun export rates 45%). Handgun registry laws were too highly correlated with permit-to-purchase licensing to include in the statistical model. Several other gun sales laws regulations were associated with reduced cross-state diversion of guns to criminals including regulation of private sales of handguns, junk gun bans, and laws requiring gun owners to report lost or stolen firearms (Webster et al., 2013).

The Firearm Safety Act of 2013 would improve current policies designed to keep firearms from the severely mentally ill who pose a danger to others, particularly if they were to possess firearms. HB 294 would improve our state's ability to identify through our background check system those who are prohibited from possessing firearms due to severe mental illness. A recent study evaluated a policy in Connecticut which improved that state's ability to identify and screen out those who were prohibited from possessing firearms due to mental illness through their handgun purchaser licensing system and found that prohibited individuals who were identifiable by their background check system as a result of the policy change committed violent crimes at a significantly lower rate than was the case before the policy was implemented (Swanson et al, 2013).



Assault weapons and other firearms with large capacity ammunition feeding devices are commonly used in mass shootings and the greater the ammunition capacity of the firearm used in a mass shooting, the more victims were injured or killed by gunfire (Roth and Koper, 1997).

By reducing the maximum capacity of ammunition feeding devices for semi-automatic firearms from more than 20 to more than 10, the Firearms Safety Act of 2013 may reduce the number of victims wounded or killed in mass shootings or other events in which a criminal assailant fires a large number of rounds. Incidents in which a law-abiding citizen would need and be able to use a firearm that could hold more than ten rounds of ammunitions are likely to be extremely rare. A study of 198 home invasion crimes in Atlanta, Georgia – a city where gun ownership likely to be quite high – found that residents attempted to use a firearm in self-defense in only three (1.5%) cases (Kellermann et al, 1995).

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# **EXHIBIT 4**

GAO

The Honorable Henry A. Waxman,  
Ranking Minority Member, Committee on  
Government Reform, House of  
Representatives

March 2001

# FIREARMS

## Purchased From Federal Firearm Licensees Using Bogus Identification



G A O

Accountability \* Integrity \* Reliability







United States General Accounting Office  
Washington, D.C. 20548

March 19, 2001

The Honorable Henry A. Waxman  
Ranking Minority Member  
Committee on Government Reform  
House of Representatives

Dear Mr. Waxman:

This report responds to your request and subsequent conversations with your office that we conduct an investigation that demonstrates the difficulty that law enforcement officials have in preventing the illegal purchase of firearms. The Brady Handgun Violence Prevention Act of 1993<sup>1</sup> required the Attorney General of the United States to establish the National Instant Criminal Background Check System, known as NICS. Referred to as an instant background check, NICS is a computerized system operated by the Federal Bureau of Investigation (FBI). Based on inquiries from federal firearm licensees (FFL),<sup>2</sup> NICS searches the backgrounds of prospective firearm purchasers for criminal or other information that would disqualify them from purchasing firearms.

Specifically, you asked that we attempt to purchase firearms, acting in an undercover capacity and using counterfeit identification, in states that rely on the instant background check and do not require fingerprinting or a waiting period<sup>3</sup> for such purchases. In addition, you requested that we determine how easily firearms can be purchased using the Internet.

The five states that we selected to purchase firearms in—Virginia, West Virginia, Montana, New Mexico, and Arizona—conformed to the Brady Act's minimum requirements, relying on an instant background check. They do not have additional requirements for fingerprinting or waiting periods. Some other states impose such requirements for purchasing

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<sup>1</sup>18 U.S.C. § 922(t).

<sup>2</sup> A federal firearm licensee (FFL) is a person licensed by the Bureau of Alcohol, Tobacco and Firearms (ATF) as a manufacturer, dealer, or importer of firearms. 28 C.F.R. § 25.2.

<sup>3</sup> A waiting period generally refers to the period of time between the date an individual applies to purchase a firearm and the date the individual is allowed to take delivery of it.

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firearms in addition to those of the Brady Act. These requirements include, among others, the successful completion of firearm safety or training courses, approval of license applications by the local police commissioners or chiefs of police, waiting periods as long as 2 weeks, and fingerprinting.

To address your concerns, we created counterfeit state driver's licenses for the five states with fictitious names, dates of birth, and/or social security numbers using off-the-shelf software, a scanner, a laminator, and a color laser printer. Two special agents acting in an undercover capacity used the counterfeit driver's licenses in attempts to purchase firearms from gun stores and pawnshops that were licensed by the federal government to sell firearms in the five selected states. We selected these gun stores and pawnshops at random from the yellow pages of local telephone directories.

We also searched an Internet Web site that labels itself as a "directory service," contacted 10 advertisers of firearms, and attempted to purchase firearms from 2 individuals. Neither individual would send firearms through the mail, but both were willing to complete the transactions in person. As agreed with your office, we did not attempt to complete these transactions. We performed our investigation from late October 2000 through February 2001 in accordance with investigative standards established by the President's Council on Integrity and Efficiency.

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## Results in Brief

We purchased firearms in five selected states—Virginia, West Virginia, Montana, New Mexico, and Arizona—using counterfeit driver's licenses with fictitious identifiers. In these states, the FFLs we contacted, with the possible exception of one, adhered to existing federal and state law regarding the mechanics of such a purchase. We will refer the matter relating to that FFL to the appropriate law enforcement agency.

Consistent with the Brady Act, in the five states we found that the instant background check does not positively identify purchasers of firearms. Rather, it is a negative check that cannot ensure that the prospective purchaser is not a felon or other prohibited person whose receipt and possession of a firearm would be unlawful. Similarly, in one state—Virginia—the additional step of requiring a state criminal history check was also a negative check. Further, in one state when we purchased a revolver,

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the salesperson advised us that the NICS check was not required because the firearm had been manufactured over 100 years ago, in approximately 1893.<sup>4</sup>

We also easily made inquiries of private entities that advertised firearms on the Internet. Of the 10 advertisers we contacted, 2 individuals agreed to sell us their firearms with no identification required if we met face-to-face.

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## Brady Act Requirements

The Brady Act requirement for instant background checks pertains to prospective purchasers of firearms that were manufactured after 1898, i.e., firearms that are not considered antiques. To accomplish this, the NICS Operations Center searches three separate databases:<sup>5</sup>

- the NICS Index, which contains records on persons known to be disqualified under federal law from possession of firearms;
- the National Crime Information Center, a computerized information system of criminal justice data established by the FBI, which contains records on protective orders, deported felons, and fugitives from justice; and
- the Interstate Identification Index, which contains criminal history records.

In certain states, a point-of-contact state agency serves as an intermediary between those licensed to sell firearms and the NICS. A state that is operating as a point of contact for NICS checks may simultaneously search available databases in state and local law enforcement agencies.

Bureau of Alcohol, Tobacco and Firearms (ATF) regulations implementing the Brady Act provide that before an FFL may sell or deliver a firearm, the prospective purchaser must provide photo-identification issued by a government entity. The identification must contain the purchaser's name, state of residence, age, gender, and race.<sup>6</sup> Because driver's licenses are

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<sup>4</sup> Antique firearms, which include weapons manufactured before 1899, are not subject to NICS checks. 18 U.S.C. § 921(a)(3) and 27 C.F.R. § 178.11.

<sup>5</sup> 28 C.F.R. § 25.6 (c)(1)(iii).

<sup>6</sup> 28 C.F.R. § 25.7.

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issued by individual states, prospective purchasers of firearms frequently use them as a form of identification.

ATF regulations provide that prior to the transfer of a firearm to a prospective purchaser, the purchaser must complete, sign, and date section A of ATF Form 4473, “Firearms Transaction Record Part I –Over-the-Counter.”<sup>7</sup> (See app. I.) The form requests the purchaser's name, gender, height, weight, race, residence address, birth date, and place of birth. It also requires “yes” or “no” answers to 12 personal background questions. To avoid misidentification of firearm purchasers as felons or other prohibited persons, the ATF form also solicits certain optional information about the purchaser, such as the purchaser's social security number.<sup>8</sup>

Upon receiving an FFL's request for an instant background check, the NICS Operations Center or state point of contact<sup>9</sup> must provide one of three responses:

- “Proceed” means that no disqualifying or negative information is in the system to indicate that a firearm purchase would be unlawful and the transaction may proceed.
- “Denied” means that the purchase would be unlawful and prohibits the FFL from transferring the firearm to the purchaser.
- “Delayed” means that the transferee must delay the transaction until contacted again by NICS or 3 business days have elapsed.<sup>10</sup> If NICS does not provide a response after 3 business days, the FFL may transfer the firearm.

Accordingly, if there is no disqualifying or negative information to indicate that the sale may be unlawful, the sale may take place.

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<sup>7</sup> 27 C.F.R. § 178.124(a).

<sup>8</sup> 27 C.F.R. § 178.124(c)(2).

<sup>9</sup> In some instances, states acting as points of contact may use terms other than those used by NICS. For example, an “approve” response may be the equivalent of a “proceed” response, a “pending” response may be the equivalent of a “delayed” response, and a “non-approval” response may be equivalent to a “denied” response.

<sup>10</sup> An ATF official and several FFLs informed us that the most common reason for a delay is that the gun purchaser's name and identification are similar to the name and identification of a prohibited individual.

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## Undercover Agents Purchased Firearms Using Counterfeit Driver's Licenses With Fictitious Identifiers

In Virginia, West Virginia, Montana, New Mexico, and Arizona, special agents acting in an undercover capacity purchased a total of seven firearms and a number of magazines. One firearm was a semiautomatic assault weapon, and some of the magazines exceeded 10 rounds of ammunition.<sup>11</sup> All purchases were made from FFLs at gun stores, pawnshops, and a sporting goods store. The agents used counterfeit driver's licenses with fictitious names and identifiers as identification. With the possible exception of one in New Mexico, the FFLs we contacted complied with both the Brady Act and respective state laws when they sold the firearms to the undercover agents.

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### Virginia Purchase

An undercover agent, using a counterfeit Virginia driver's license and a counterfeit earnings and leave payroll statement<sup>12</sup> in the same fictitious name, purchased a Smith & Wesson Model 6906 9mm stainless steel semiautomatic pistol with two 12-round ammunition magazines from a gun store in Richmond, Virginia. (See fig. 1.) The salesperson told the agents that this firearm was part of a group of firearms sold to the gun store by a Virginia police department for resale.

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<sup>11</sup> The sale of either semiautomatic assault weapons or magazines containing more than 10 rounds is illegal unless, as here, the weapons and magazines were manufactured before Sept. 13, 1994. 18 U.S.C. § 922(v) and (w); 27 C.F.R. § 178.40(a) and (b)(1); and 27 C.F.R. § 178.40a.

<sup>12</sup> Virginia state law requires two forms of identification. Virginia Code Ann. § 18.2-308.2:2 B.1.

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**Figure 1: Richmond, Virginia, Purchase**

Model 6906 Smith & Wesson 9mm Stainless Steel Semiautomatic Pistol With 12-Round Ammunition Magazine

The gun store salesperson requested that the agent complete ATF Form 4473 and a Virginia State Police firearm purchase form. After checking both forms to make sure information provided was identical and complete, the salesperson ran the standard instant background check on the fictitious name, date of birth, and social security number provided by the undercover agent. He also provided the same information to the Virginia State Police for a state criminal record check. The records checks by both NICS and the Virginia State Police immediately came back with a proceed-to-sell response, meaning that no criminal record was associated with the

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information provided. The agent paid for the firearm and, with a fellow agent, departed the store, carrying the firearm and ammunition magazines.

Virginia requires an additional background check not required by the Brady Act. Under Virginia law, a prospective firearm purchaser must consent in writing to having an FFL telephone the Virginia State Police to check for a criminal history record.<sup>13</sup> In checking for a criminal history, the FFL must provide essentially the same identifying information to the Virginia State Police as it provides to the NICS. The state police are to inform the FFL whether the sale is prohibited or it may proceed with the sale. Under Virginia law, the state police are encouraged to provide a response “to the requesting dealer [FFL] during the dealer's call or by return call without delay.” Also under Virginia law, an FFL may proceed with the sale of a firearm without penalty if the FFL has not heard from the Virginia State Police by the end of the next business day following the criminal history request. An FFL's ability to make the sale under this condition is contingent on NICS's having advised the FFL that it may proceed.

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#### West Virginia Purchase

An undercover agent used a counterfeit West Virginia driver's license with a fictitious name to purchase a Bresa .380 semiautomatic pistol and a box of .380 ammunition from a sporting goods store in Berkeley County, West Virginia. (See fig. 2.)

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<sup>13</sup> Virginia Code Ann. § 18.2-308.2:2.



**Figure 2: Berkeley County, West Virginia, Purchase****.380 Bresa Semiautomatic Pistol With 8-Round Magazine and .380 Ammunition**

The agent presented a counterfeit West Virginia driver's license and completed the ATF Form 4473. The initial NICS check by the salesperson came back with a delay response, indicating that the system was either down or that the name, date of birth, and/or social security number submitted was similar to ones associated with a criminal history. The salesperson told the agent that NICS had 3 business days from the time he called in the name-check to respond and that if NICS did not respond within that period, he could sell the firearm to the agent. During this transaction, the salesperson stated that his main concern about a delay notification from the NICS was the potential loss of the sale. In this case, the proceed-to-sell order came back from NICS in less than 24 hours. The agent returned to the sporting goods store, paid for the firearm and ammunition, and departed the store with the merchandise and a companion agent.

## Montana Purchases

An undercover agent purchased (1) a Russian Samozariadnyia Karabina Simonova (SKS) 7.62mm semiautomatic rifle with a bipod rest and a 4x scope and (2) a .22 caliber semiautomatic rifle with a folding stock, 4x scope, and a 10-shot magazine. (See fig. 3.) The agent purchased the firearms from a Billings, Montana, pawnshop and filled out the ATF Form



4473 using a counterfeit Montana driver's license. The initial NICS check by the salesperson came back as a delay, and the salesperson explained that he could sell the firearms to the agent if NICS did not respond after the required 3 business days. During this transaction, the salesperson told us that his main concern in getting the delay notification from the NICS was the potential loss of the sale. When the proceed-to-sell order came back from NICS, in less than 24 hours, the agent and a companion agent returned to the pawnshop, paid for the firearms and ammunition, and left with the merchandise.

At a second pawnshop in Billings, Montana, the two agents also purchased 2 boxes of 7.62mm Russian-made ammunition and a box of .22 caliber ammunition along with a 30-round "banana clip," or magazine, for the Russian SKS and 2 additional 10-shot magazines for the .22 caliber. No identification or paperwork was required to purchase the ammunition or magazines. (See fig. 3.)

**Figure 3: Billings, Montana, Purchases**



7.62mm Russian-Manufactured Samozariadnyia Karabina Simonova Semiautomatic Rifle With Bipod Rest, 4x Scope, 30-Round Banana Clip, and 7.62mm Ammunition (Top)

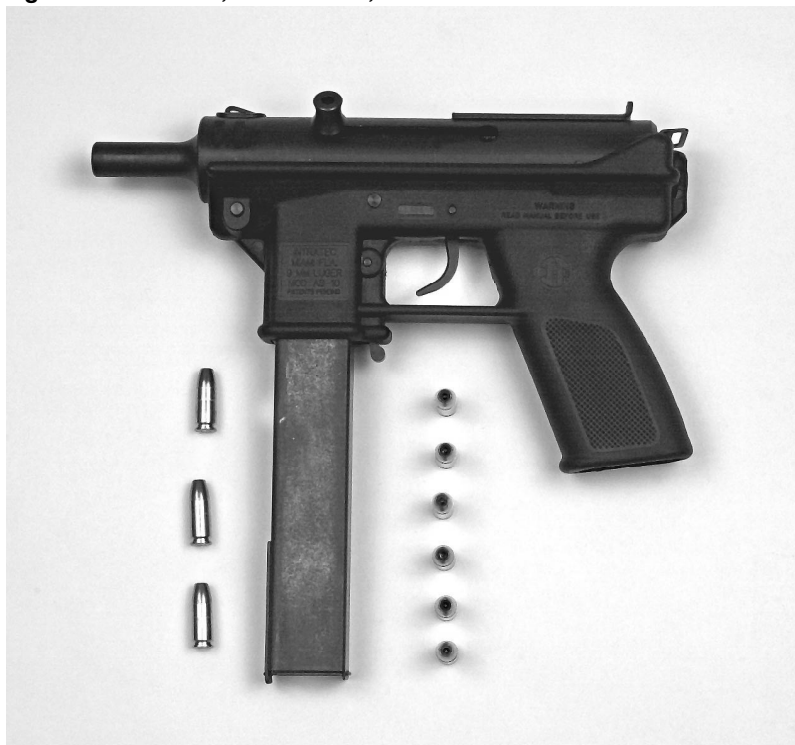
.22 Caliber Semiautomatic Rifle With Folding Stock, 4x Scope, 3 10-Shot Magazines, and .22 Caliber Ammunition (Bottom)

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## New Mexico Purchase

An undercover agent attempted to purchase an Intratec 9mm semiautomatic pistol, model AB-10, and a 32-shot magazine from a pawnshop in Santa Fe, New Mexico. New Mexico requires only a valid state photo-identification and the completion of the ATF Form 4473. On the first day, the salesman's attempt to contact NICS was unsuccessful because the circuits were busy. When the agent called the next day, the salesman told the agent that he had contacted NICS and received a delay message.

Later that same day, the undercover agent and a fellow agent returned to the pawnshop. At that time, the salesperson suggested that the individual accompanying the agent could purchase the firearm and transfer it to the first agent using a bill of sale. The second agent, also using a counterfeit New Mexico driver's license, filled out the ATF Form 4473. The salesperson checked the second agent's form against his license for accuracy and initiated the NICS background check, which came back immediately as a proceed-to-sell response. The first agent then used his credit card to purchase the previously selected firearm and magazine in the second agent's name. The first agent also used his credit card to purchase a box of 9mm 124-grain Hydra-Shok jacketed hollow-point ammunition. This purchase was based on the salesperson's statement that it was the best ammunition he had in stock to penetrate a bulletproof vest similar to those worn by police officers. (See fig. 4.)

**Figure 4: Santa Fe, New Mexico, Purchase**

Model AB-10 Intratec 9mm Semiautomatic Pistol With 32-Shot Magazine and 9mm 124-Grain Hydra-Shok Jacketed Hollow-Point Ammunition

FFLs are required to make entries on the ATF Form 4473 for the sale of firearms and include on the form the name of the intended recipient of the firearm. Title 18 U.S.C. § 924(a) provides that whoever knowingly makes any false statement or representation in the records required to be kept for the sale of firearms shall be fined, imprisoned for 5 years, or both. Further, instructions for ATF Form 4473 warn that “[A] licensee who knowingly delivers a firearm to an individual who is not buying the firearm for himself or herself or as a gift violates the law by maintaining a false ATF F [Form] 4473.” In this instance, the FFL may have violated the law by selling a firearm to an individual who he knew was not the intended recipient.

## Arizona Purchases

An undercover agent used a counterfeit Arizona driver's license to purchase (1) a Spanish-manufactured half-break .38 caliber 5-shot revolver, circa 1893, with a box of Smith & Wesson .38 caliber ammunition and (2) an

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Italian-manufactured .25 caliber semiautomatic pistol from a gun store in Tucson, Arizona. (See fig. 5.)

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**Figure 5: Tucson, Arizona, Purchases**



.38 Caliber Spanish-Manufactured Half-Break 5-Shot Revolver, Circa 1893, With .38 Caliber Ammunition (Top)

Model GT27 Italian-Manufactured .25 Caliber Semiautomatic Pistol With 7-Shot Magazine (Bottom)

Prior to purchasing the firearms, the agent completed the ATF Form 4473. Arizona requires an individual wanting to purchase a firearm to show a valid photo-identification. The NICS check by the salesperson came back with a proceed-to-sell response. Because Arizona is a point-of-contact state, the salesperson contacted the Arizona Department of Public Safety for the NICS check. The department simultaneously searched available state and local law enforcement files. Both searches were negative, allowing the sale to proceed.

During the transaction, the salesperson stated that he was required to do an NICS check only on the .25 caliber semiautomatic handgun because the .38 caliber revolver was over 100 years old and was considered a “curio.”

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The agent paid for the weapons and ammunition, and he and a companion agent departed the store with the merchandise.

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## Attempt to Purchase a Firearm Over the Internet

We also investigated the possibility of purchasing a firearm over the Internet by searching a Web site that labels itself a directory service.<sup>14</sup> An agent acting in an undercover capacity responded to 10 of 21 advertisements offering firearms for sale; 8 of the advertisers were FFLs and 2 were individuals. The FFL advertisers would ship the firearm offered for sale to only an FFL and refused to ship it to an individual. We also attempted to purchase firearms from the two advertisers we determined to be individuals but did not complete the transactions.

One individual, in Warner Robbins, Georgia, advertised a Smith & Wesson .45 caliber firearm for sale for \$390. An agent acting in an undercover capacity contacted the individual by telephone and told him he was calling from the Northern Virginia area. After verifying that the firearm was for sale, the agent attempted to convince the individual to mail the firearm to him; but he refused to mail the firearm to anyone other than an FFL. The agent then told the individual that he would be in the Warner Robbins area in a few days, and the individual readily agreed to sell the firearm to the agent in a “face-to-face” transaction. The individual asked the agent if he was a criminal; the agent assured him that he was not and provided a fictitious name. The individual then agreed to sell the firearm for cash and stated that he would not require any identification. He then asked the agent to call him for directions to his home when he arrived in Warner Robbins.

In a second advertisement, an individual in Orlando, Florida, offered to sell a 9mm semiautomatic firearm for \$339. An undercover agent telephoned the individual; stated that he was calling from the Washington, D.C., area; and verified that the firearm was for sale. The seller refused to send the firearm through the mail but agreed to meet the agent to complete the transaction. He stated that he would sell the firearm for cash and would not require identification.

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<sup>14</sup> The site notes that it makes no warranty that the seller or the guns actually exist and that all gun transfers must comply with ATF and shipping regulations.

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As arranged with your office, unless you disclose its contents earlier, we plan no further distribution of this report until 30 days after the letter's date. At that time, we will send copies of the report to interested congressional committees, the Secretary of the Treasury, the Attorney General, and the Directors of the FBI and ATF. The report will also be available on GAO's home page at [www.gao.gov](http://www.gao.gov). If you have any questions, please call Assistant Director Patrick Sullivan at (202) 512-6722. Senior Special Agents John Cooney, Woodrow Hunt, William McDaniel, and Thomas Wiley and Senior Attorney Barry Shillito made key contributions to this investigation and report.

Sincerely yours,



Robert H. Hast  
Managing Director  
for Special Investigations





Appendix I

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# Bureau of Alcohol, Tobacco and Firearms

## Form 4473

<b>DEPARTMENT OF THE TREASURY</b> <b>BUREAU OF ALCOHOL, TOBACCO AND FIREARMS</b> <b>FIREARMS TRANSACTION RECORD PART I - OVER-THE-COUNTER</b>		OMB NO. 1512-0129 TRANSFEROR'S TRANSACTION SERIAL NUMBER	
<b>NOTE:</b> Prepare in original only. All entries on this form must be in ink. See Important Notices, Definitions and Instructions			
<b>SECTION A - MUST BE COMPLETED PERSONALLY BY TRANSFEREE (BUYER)</b>			
1. TRANSFEREE'S (Buyer's) NAME (Last, First, Middle)		2. HEIGHT	3. WEIGHT
<input type="checkbox"/> MALE  <input type="checkbox"/> FEMALE			4. RACE
5. RESIDENCE ADDRESS (No., Street, City, County, State, ZIP Code)		6. BIRTH DATE MONTH DAY YEAR	7. PLACE OF BIRTH (City)  STATE OR FOREIGN COUNTRY
8. <b>OPTIONAL INFORMATION</b> - The information requested in this item (8) is strictly optional but will help to ensure the lawfulness of the sale and avoid the possibility of being misidentified as a felon or other prohibited person.			
SOCIAL SECURITY NUMBER		ALIEN REGISTRATION NUMBER	
A		MISCELLANEOUS NUMBER (Military ID, etc.)	
9. CERTIFICATION OF TRANSFEREE (Buyer) - Questions a. through l. must be answered with a "yes" or a "no" in the box at the right of the question.			
a. Are you the actual buyer of the firearm indicated on this form? If you answer "no" to this question the dealer cannot transfer the firearm to you. (See Important Notice 1.)		g. Have you been discharged from the Armed Forces under dishonorable conditions?	
b. Are you under indictment or information in any court for a crime for which the judge could imprison you for more than one year? An information is a formal accusation of a crime made by a prosecuting attorney.		h. Are you an alien <b>illegally</b> in the United States?	
c. Have you been convicted in any court of a crime for which the judge could have imprisoned you for more than one year, even if the judge actually gave you a shorter sentence? (See Important Notice 5 and EXCEPTION.)		i. Have you ever renounced your United States citizenship?	
d. Are you a fugitive from justice?		j. Are you subject to a court order restraining you from harassing, stalking, or threatening an intimate partner or child of such partner? (See Important Notice 6 and Definition 4.)	
e. Are you an unlawful user of, or addicted to, marijuana, or any depressant, stimulant, or narcotic drug, or any other controlled substance?		k. Have you been convicted in any court of a misdemeanor crime of domestic violence? This includes any misdemeanor conviction involving the use or attempted use of physical force committed by a current or former spouse, parent, or guardian of the victim or by a person with a similar relationship with the victim. (See Definition 5.)	
f. Have you ever been adjudicated mentally defective or have you been committed to a mental institution?		l. Are you a citizen of the United States?	
m. What is your State of residence? _____ (State)		If you are not a citizen of the United States, you have a State of residence only if you have resided in the State for at least 90 days prior to the date of this sale. (See Definition 6.)	
I CERTIFY THAT THE ABOVE ANSWERS ARE TRUE AND CORRECT. I UNDERSTAND THAT A PERSON WHO ANSWERS "YES" TO QUESTION 9b IS PROHIBITED FROM PURCHASING A FIREARM. I UNDERSTAND THAT A PERSON WHO ANSWERS "YES" TO ANY OF THE QUESTIONS 9c THROUGH 9k IS PROHIBITED FROM PURCHASING OR POSSESSING A FIREARM. I ALSO UNDERSTAND THAT THE MAKING OF A FALSE ORAL OR WRITTEN STATEMENT OR THE EXHIBITING OF ANY FALSE OR MISREPRESENTED IDENTIFICATION WITH RESPECT TO THIS TRANSACTION IS A CRIME PUNISHABLE AS A FELONY. I FURTHER UNDERSTAND THAT MY REPETITIVE PURCHASE OF FIREARMS FOR THE PURPOSE OF RESALE FOR LIVELIHOOD AND PROFIT WITHOUT A FEDERAL FIREARMS LICENSE IS A VIOLATION OF LAW. (SEE IMPORTANT NOTICE 7.)			
TRANSFEREE'S (Buyer's) SIGNATURE			DATE
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**Appendix I**  
**Bureau of Alcohol, Tobacco and Firearms**  
**Form 4473**

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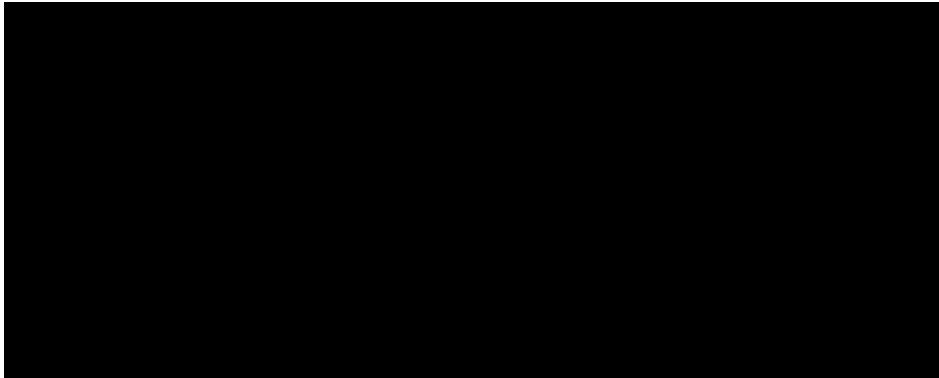
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# **EXHIBIT 5**



KEVIN KAMENETZ  
*County Executive*

YOLANDA G. WINKLER  
*Director of Government Affairs*

BILL NO.: **HB 294**

TITLE: **Firearms Safety Act of 2013**

SPONSOR: **Speaker**

COMMITTEE: **Judiciary Committee**

POSITION: **SUPPORT WITH AMENDMENTS**

DATE: **March 1, 2013**

STATEMENT OF CHIEF JAMES JOHNSON, REPRESENTING THE BALTIMORE COUNTY POLICE DEPARTMENT:

The Baltimore County Police Department **supports with amendments** the passage of House Bill 294.

I am the Police Chief for Baltimore County, Maryland. My testimony today reflects the support of the Maryland Chiefs of Police Association and the National Law Enforcement Partnership to Prevent Gun Violence, which I currently chair. I have offered testimony in Congress on the gun violence issue – specifically, in support of changes in federal law related to background checks for all weapon purchases, a limit of no more than 10 rounds for high capacity magazines, and reinstatement of the 1994 assault weapons ban. I strongly support the bill before you today, with the amendments submitted by the Maryland Chiefs of Police Association.

The proposed Maryland Firearm Safety Act of 2013 has many critical, important provisions. My testimony will focus on the value of licensing, restricting magazines to no more than 10 rounds and a ban on assault weapons. My testimony also will address what I consider impressive legislation to address the mental health issues that are a factor in many, many cases of firearms violence in Maryland and across the nation.

Law enforcement leaders everywhere have been working to reduce the gun violence epidemic. This is a public health issue. Law enforcement is on the front lines of this issue, nobly carrying out the decisions our elected officials make. Already, we have had great success in Maryland reducing homicides caused by gun violence. Thanks to superior police work and advancements in technology, homicides in Maryland have dropped since 2007, when we recorded 412 homicides. In contrast, by 2011, the most recent year for which comprehensive data is available,

Maryland had 272 homicides caused by firearms. I strongly feel that these numbers would be much higher were it not for the expertise and dedication of our police officers, EMTs and other first responders – as well as the work of what arguably is the most advanced health care system in the world.

It is a fact that nearly 30,000 Americans are killed in firearms violence each year. It is a fact that thousands more die from suicides and accidental shootings. It is a fact that firearms violence costs citizens hundreds of millions of dollars per year. One recent study revealed that in just six cities similar in size to Baltimore the cost of gun violence was \$38 million per week! Experts anticipate that within the next two years the number of deaths caused by gun violence will exceed deaths related to automobile accidents. Here is another fact: In 2011, more police officers were killed by firearms violence than any other means. This has not happened in nearly two decades.

The proposal before you today will enhance Maryland's existing accomplishments in reducing gun violence. This legislation will reduce the number of deaths associated with firearms. We must do all we can to stop guns from getting into the wrong hands and to keep excessive fire power out of our communities. The sensible solutions proposed by Governor O'Malley will help to achieve that.

Let's review the issues before Marylanders today, beginning with assault weapons.

I and many other knowledgeable detectives and officers who deal with gun violence every day find the definition of assault weapons written in the Firearm Safety Act of 2013 comprehensive, clear and concise. This is crucial, because the debate over what an assault weapon is has been and continues to be an issue in discussions about gun laws.

Assault weapons have no place in our communities and on our streets. They are used to commit crimes of violence across America, in our State, and in my County. These weapons should be available only to public safety and the military. Originally designed and engineered for the battlefield, these weapons are tactically engineered to offer superior tactical and offensive capabilities. They are engineered and designed to allow the user to carry and discharge dozens upon dozens of rounds, uninterrupted by mechanical failure. They allow its user to stay on target; they minimize "kick" so the shooter can deliver accurate hit after hit. From the weapon's weight to its ability to support add-on tactical features, the weapons we call "assault weapons" are superior killing machines. As we have seen nationally, these weapons are used with greater frequency in mass killings. Mass murderers choose them for all the reasons I just outlined.

Now, about magazines: I and my peers in public safety believe it is reasonable for Maryland to adopt a ten-round limit on magazines. The reloading process is absolutely critical to a victim's chance for survival. The time it takes for a shooter to reload gives someone precious moments to



KEVIN KAMENETZ  
County Executive

YOLANDA G. WINKLER  
Director of Government Affairs

seek cover or concealment, to escape or even to take offensive action against the shooter. In the shooting of Congresswoman Gifford's in Tucson, this factor -- the time it took the shooter to reload -- allowed the shooting to end. A citizen attacked the shooter as he was reloading after discharging a 33-round magazine. More rounds fired means more hits, more lives lost and more physical injury. Do not be fooled by those who tell you that a magazine can be changed in fewer than two seconds. People who use high capacity magazines in crimes of violence are oftentimes emotional, mentally disturbed or in a state of rage. They are not working in a calm, controlled firing range environment.

This bill contains an impressive and comprehensive set of requirements designed to restrict the mentally and emotionally ill from obtaining or possessing a firearm. The bill specifies that a hearing officer should be allowed to decide if a person should not possess a firearm -- if credible evidence exists that he or she poses a danger to themselves or others. We believe this provision will reduce firearm-related deaths and injury. We need to ensure that this information is handled as expediently as we handle domestic orders.

Regarding licensing of firearms, I strongly support licensing. Research shows that licensing will reduce the number of non-intentional shootings by ensuring that gun owners know how to safely use and store firearms. A licensing provision will increase compliance with existing firearms laws by requiring gun owners to demonstrate knowledge of those laws. It will decrease illegal gun sales and purchases by ensuring that all licensees are eligible to possess firearms under Federal and State law. It will reduce murder rates; other states with licensing requirements have shown such a reduction.

I urge you to keep the fingerprinting requirement in the Bill. This will help law enforcement to identify people involved in gun crimes. Fingerprinting is not an inconvenience. Maryland citizens are quite familiar with rendering a fingerprint for bank transactions and a growing list of employment opportunities. Likewise, I do not think passing a performance-based written test that demonstrates whether an applicant can safely load, fire and store a weapon and has knowledge of applicable firearms laws is unreasonable.

Perhaps the most significant result of the licensing process will be diminished straw purchasing attempts and transactions. In law enforcement, we know that criminals prohibited from buying guns attempt to use straw purchasers. Criminals want a clean gun, a gun that was not used in crimes of violence that could be linked to them. Often, the people recruited to make a straw purchase are intellectually unsophisticated or coerced into straw purchasing attempts. In a recent case in Baltimore County, an intellectually disabled person was used to purchase numerous weapons, some of which were recovered and confirmed as having been used in crimes of violence.



I strongly support the instruction component of the Bill. The current viewing requirement -- viewing a 30-minute video -- is insufficient. We can do better. I do not believe straw purchasers will sit through a four-hour training program. I believe that many straw purchasers will not pass a written cognitive test on firearms safety and laws governing the use of firearms. The requirement that purchasers obtain proof that they completed firearms safety training is an exceptional element of the Bill.

Language in the Bill detailing mental health disqualifiers is extraordinary. We have already noted the wisdom of compelling someone to surrender firearms and to prohibit possession due to an emergency evaluation. Now, in addition, the bill will prohibit people who experienced a voluntary or involuntary commitment to a mental health facility for more than 30 days from purchasing or possessing a weapon. This is a great help in keeping guns out of the hands of unstable, mentally ill people.

The language proposing that a person under protection of a court-appointed guardian be prohibited from purchasing or possessing a firearm benefits public safety. Family members often contact police, advising that they care for someone under guardianship who is trying to obtain a firearm.

The Bill prohibits people who cannot legally possess a regulated firearm from possessing ammunition. This brings us in line with Federal law. The bill includes a comprehensive set of instructions for information to be entered into the National Instant Criminal Background Check System (NICS) system. This will allow for a more comprehensive background check, which Maryland greatly needs.

State law enforcement is pleased to see language in the Bill prohibiting certain individuals from obtaining or keeping rifles and shotguns when certain conditions exist. The proposed language is more consistent with Federal law.

We support the requirement that new Maryland residents register all regulated firearms within 30 days. This is sound and reasonable. Why should we treat a new Maryland resident any different than a life-long resident?

We support additional language that requires 16 hours of training for people seeking permits to carry guns. Carrying a firearm in public is an awesome responsibility. It is not unreasonable to expect proper training for people who carry.

Law enforcement strongly believes the proposed legislation effectively and reasonably addresses many of the challenges police encounter when investigating gun violence and prohibited purchasers and possessors. I am confident that these changes in law will make Maryland safer from gun violence. I strongly urge a favorable report for House Bill 294.



KEVIN KAMENETZ  
*County Executive*

YOLANDA G. WINKLER  
*Director of Government Affairs*

Accordingly, the Baltimore County Police Department **supports with amendments** the passage of House Bill 294. For more information, please contact Sergeant Anissa Watkins, Legislative Liaison at 410-269-7760

cc: Chief James Johnson  
Anissa Watkins

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# **EXHIBIT 6**





## BALTIMORE POLICE DEPARTMENT



SB 281

STEPHANIE RAWLINGS-BLAKE  
Mayor

February 6, 2013

ANTHONY W. BATTS  
Police Commissioner

**TO:** Members of the Senate Judicial Proceedings Committee

**FROM:** Anthony W. Batts, Police Commissioner

**RE:** Senate Bill 281-Firearms Safety Act of 2013

**POSITION: SUPPORT**

Chairman Frosh, Vice-Chair Gladden and Members of the Committee, please be advised that the Baltimore Police Department **supports** Senate Bill 281.

Senate Bill 281 proposes a comprehensive package of reforms to include a ban on military-style assault weapons, limiting the capacity of magazines, establishing licensing requirements to include background checks; mandatory fingerprinting; and safety training, a reduction in the allowable magazine capacity size from 20 to 10 rounds, and will expand the definition of who is prohibited from firearms possession due to mental illness and other factors.

Reducing firearm violence and targeting firearms offenders play significant roles in Baltimore's crime fighting efforts and the City's overall violence reduction strategies. Mayor Stephanie Rawlings-Blake has spoken about our recent success in violent crime reduction and her overall approach to crime in Baltimore. Our successes have focused on targeting violent offenders and gun violence. Strong law enforcement partnerships have also been central to our success. Law enforcement cannot do this alone and we need strong legislation to help us achieve these results. A clear message must be sent to criminals that firearm violence and repeat offenses will not be tolerated.

Most of the homicides and non-fatal shootings that plague Baltimore are perpetrated by prohibited persons with illegal guns. Last year 79% of all homicide suspects arrested had prior records and approximately 45% had firearms offenses in their criminal histories. This is a trend that we had been tracking for a period of time. Additionally one of the issues addressed through our GunStat process is the data on repeat gun offenders that shows that many of those charged with violence or firearms offenses have a history of arrests/convictions for crimes involving firearms.

Maryland's most violent offenders keep getting guns and endangering neighborhoods statewide. We must work collectively to prevent prohibited persons from possessing firearms or ammunition. The proposed licensing requirement in SB 281 will require an applicant for a license to participate in training and submit fingerprints so that a comprehensive background

c/o 242 W. 29th Street • Baltimore, Maryland 21211

MSP000153

JA0119

investigation is completed, ensuring that the applicant is not prohibited from possessing a handgun. States like New York, New Jersey and Massachusetts have shown that licensing will also serve as a deterrent to the straw buyers of a handgun. This is particularly true when enacted as part of a comprehensive state regulatory package similar to that proposed today.

Illegal guns also make their way to our streets through the secondary market and as a result of burglary or theft. Last week, the Baltimore Police Department working in conjunction with our federal partners to intercept 29 handguns and ammunition which had been taken in a burglary of a gun store the previous day in Pennsylvania. These guns were headed to the streets of Baltimore certainly affecting countless lives and victims. This speaks to the many challenges faced by law enforcement statewide.

We know by looking at successes in other jurisdictions that this type of legislation can have immediate effects. These are common sense measures and offer additional tools for law enforcement in our efforts to get violent offenders off of the street.

We respectfully request a favorable report on Senate Bill 281.

cc: The Honorable Verna Jones-Rodwell

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# **EXHIBIT 7**



Case 1:16-cv-03311-ELH Document 125-7 Filed 11/25/20 Page 2 of 104

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT COURT OF MARYLAND**

MARYLAND SHALL ISSUE, INC., *et al.*, \*

*Plaintiffs,* \*

v. \* Civil Case No. 16-cv-3311-ELH

LAWRENCE HOGAN, *et al.*, \*

*Defendants.* \*

\* \* \* \* \*

**DECLARATION OF CAPTAIN ANDY JOHNSON**

I, Captain Andy Johnson, under penalty of perjury, declare and state:

1. I am a Captain in the Maryland State Police (“MSP”). I am more than 18 years of age and am competent to testify, upon personal knowledge, to the matters stated below.

2. From September 1998 through the beginning of my service with MSP, I served in the Cecil County’s Sheriff’s Office, where I held the position of Deputy Sheriff and served as the agency range master and was responsible for firearms training for the entire department. In January 2002, I became a sworn officer with MSP. During the past 16 years, I have served in a variety of MSP units, including in routine patrol, drug enforcement, Assistant Barrack Commander, as Assistant Commander and Commander of the Firearms Enforcement Unit, Northern Command Commander of the Criminal Enforcement Division, and since August 2016 as the Commander of the Licensing Division.

3. As the Commander of the Licensing Division, I manage and oversee all day-to-day operations of the sworn and civilian personnel within the Licensing Division's Firearms Services Section and Professional Licensing Section. Within the Firearms Services Section is the Handgun Qualification License ("HQL") Unit, Firearms Registration Unit, Handgun Permit Unit, and the Inspection and Compliance Billing Unit.

4. The HQL Unit of the Firearms Services Section is responsible for processing HQL applications and is comprised of four sworn troopers and seven civilian personnel. Two civilian information technology personnel work across the Licensing Division.

5. In calendar year 2017, the Licensing Division received an average of 459 HQL applications each week. In the first quarter of calendar year 2018, the Licensing Division received an average of 583 applications each week. Attached to this Declaration as Exhibit 1 is the Licensing Division's Weekly Reports for the first quarter of calendar year 2018, which show the number of applications received each year and the average number of applications submitted weekly from 2015 through the first quarter of 2018.

6. Except in rare exigent circumstances, HQL applications are processed in the order they are submitted to MSP.

7. Processing of HQL applications begins with an initial review, which is conducted by civilian personnel. During the initial review, a civilian employee opens the application and assesses whether the application is properly completed, meaning that all of the statutory and regulatory requirements are met including the fingerprinting and training requirements.



8. When an initial reviewer determines that an application is complete, the reviewer conducts the statutorily-mandated background investigation in accordance with MSP Standard Operating Procedure 29-1403 (attached to this declaration as Exhibit 2). When an applicant is found not to have a criminal record during the initial review, the application is approved.

9. If any issues or questions arise during the statutorily-mandated background investigation, including if there is any indication that the applicant has a criminal record, the application is forwarded for a secondary review.

10. Secondary reviews are conducted by the sworn personnel within the HQL Unit in addition to two civilian personnel. During a secondary review, the reviewer investigates and determines whether the applicant has been convicted of a disqualifying offense.

11. MSP does not track the average time it takes to process HQL applications. Depending on the number of submitted applications awaiting review, completed applications that are approved during an initial review can be and have been processed within 24 hours of submission to MSP. The time to complete processing of a properly completed application during the secondary review varies depending on the time it takes to resolve any questions that arise during the background investigation, which can involve awaiting information about out-of-state convictions and related court documents.

12. During my tenure as Commander of the Licensing Division, every properly completed application that has been submitted to MSP has been processed and formally approved or disapproved within 30 days of being submitted to MSP. To the best of my

knowledge, every properly completed HQL application that has been submitted to MSP since October 1, 2013 when the HQL requirement went into effect has been processed and formally approved or disapproved within 30 days of being submitted to MSP.

13. The Licensing Division tracks the number of HQL applications pending disposition for over 15 days. Through the first quarter of calendar year 2018, there were no completed HQL applications pending disposition for longer than 15 days. *See* Exhibit 1.

14. Typically, an HQL card is produced within one to two days of the application's approval, and the card is mailed to the applicant at the address listed in the application.

15. The cost to process each HQL application exceeds \$50. The largest component of the cost to process each application is the salaries, benefits, and overtime costs to employ the civilian and sworn personnel in the HQL Unit who process HQL applications. Attached as Exhibit 3 to this Declaration is a spreadsheet (MSP001518) showing that the costs to employ these personnel was \$1,158,136.84 in 2017.

16. As shown in Exhibit 1, MSP received 23,888 HQL applications in 2017, of which only 566 were disapproved. Dividing the total cost of compensation for HQL personnel by the total number of processed applications, the average cost to review each HQL application is \$48.48.

17. Attached as Exhibit 4 to this Declaration is a spreadsheet (MSP003197) showing that the cost to produce each HQL is \$2.06, which accounts for the costs of the cards, printers, ink, and laminate. These production costs amounted to approximately

\$48,043 to produce cards associated with the 23,322 approved HQL applications in 2017. Spreading that cost of production over the total number of applications received, the production cost approximates \$2.01 per HQL application.

18. Accounting solely for the HQL personnel and card production costs, the cost per HQL in 2017 was at least \$50.49. This figure does not take into account the salary and benefits of MSP Command staff, including myself, who routinely deal with HQL issues; the computers and computer software used to process the applications; equipment for sworn personnel, including vehicles, fuel, and other costs; and infrastructure costs related to MSP's Licensing Division, including building expenses, electricity, and telephone service, among other expenses. Factoring in these other costs, the cost to administer the HQL program exceeds \$50.49 per application.

19. The fingerprint requirement of the HQL application promotes public safety, and thus furthers MSP's mission, in three key ways.

20. First, requiring that applicants submit their fingerprints helps ensure that MSP is able to positively identify HQL applicants at the time they apply for the HQL and prevents the use of false identification.

21. Second, requiring that applicants submit their fingerprints may prevent disqualified individuals from attempting to obtain an HQL and may prevent straw purchases of firearms by deterring otherwise law-abiding individuals from engaging in those transactions.

22. Third, unlike with a background check based solely on photographic identification, a fingerprint record can be used to identify if a holder of an HQL is convicted of a disqualifying offense subsequent to passing the initial background check.

23. In compliance with fingerprint rules promulgated by the Maryland Department of Public Safety and Correctional Services (“DPSCS”) in 2012 (attached to this Declaration as Exhibit 5), HQL applicants must have their fingerprints taken via livescan technology and submitted to DPSCS. Using the fingerprint record generated as part of the HQL application process, DPSCS is able to provide MSP with licensees’ updated criminal history information. This information enables MSP to revoke the HQLs of persons who become ineligible to possess them and to notify the Firearms Enforcement Unit, which is responsible for removing firearms from disqualified individuals. The Firearms Enforcement Unit investigates whether the person is still in possession of firearms and, if so, is responsible for retrieving those firearms.

24. Exhibit 6 to this Declaration is the revocation log that tracks the Arrest Disposition Report that Licensing Division regularly receives from the Department of Public Safety that contains criminal information connected with HQL applicants’ fingerprint records. HQL Unit personnel track the ensuing criminal case until disposition, and if the individual is convicted of a disqualifying offense, the Licensing Division revokes the HQL.

25. On November 17, 2017, MSP issued Advisory LD-HQL-17-003, which sets forth in a formal advisory that MSP has applied the ruling in *Chow v. State*, 393 Md. 431 (2006) interpreting “transfer” to interpret the definition of “receive” in Md. Code Ann.,

Pub. Safety § 5-117.1(c). The advisory is attached to this declaration as Exhibit 7. MSP views “transfer” and “receive” as equivalent for purposes of Maryland’s firearms laws and interprets “receive” as including the gratuitous permanent exchange of title or possession, but excluding temporary gratuitous exchanges or loans of handguns.

26. Advisory LD-HQL-17-003 reflects my understanding of how MSP has consistently interpreted the terms “receive” and “receipt” since the Office of the Attorney General interpreted them even prior to the enactment of the Firearm Safety Act in March 2013. A copy of the correspondence setting forth the Attorney General’s interpretation is attached to this Declaration as Exhibit 8.

27. On November 17, 2017, MSP issued Advisory LD-HQL-17-004, which sets forth in a formal advisory that MSP has approved the use of non-lethal, marking projectiles for the HQL live-fire training requirement. The Advisory is attached to this declaration as Exhibit 9.

28. Prior to the issuance of Advisory LD-HQL-17-004, MSP had approved the use of two types of these non-lethal, marking projectiles for the live-fire requirement in February and September 2016, respectively. Copies of the communications reflecting those approvals are attached to this Declaration as Exhibit 10.

29. Use of these non-lethal, marking projectiles does not require access to a firing range. In my experience, firing of non-lethal, marking projectiles is significantly quieter than firing of traditional ammunition, such that I do not wear ear protection when firing these rounds.

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I declare and affirm under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

Date: 8/15/18

Capt. Andy Johnson  
Captain Andy Johnson  
Maryland State Police

Case 1:16-cv-03311-ELH Document 125-7 Filed 11/25/20 Page 10 of 104

## **Declaration Exhibit 1**

Case 1:16-cv-03311-ELH Document 125-7 Filed 11/25/20 Page 11 of 104

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## ing Division Weekly Report

**Maryland Department of State Police / Licensing Division**  
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**Pikesville, Maryland**  
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DHMH Import Status  
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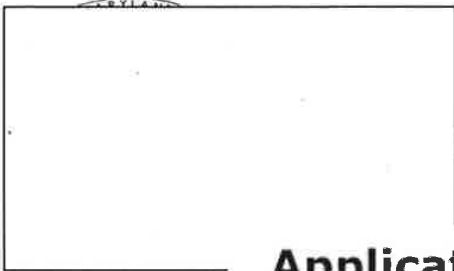
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## Licensing Division Weekly Report

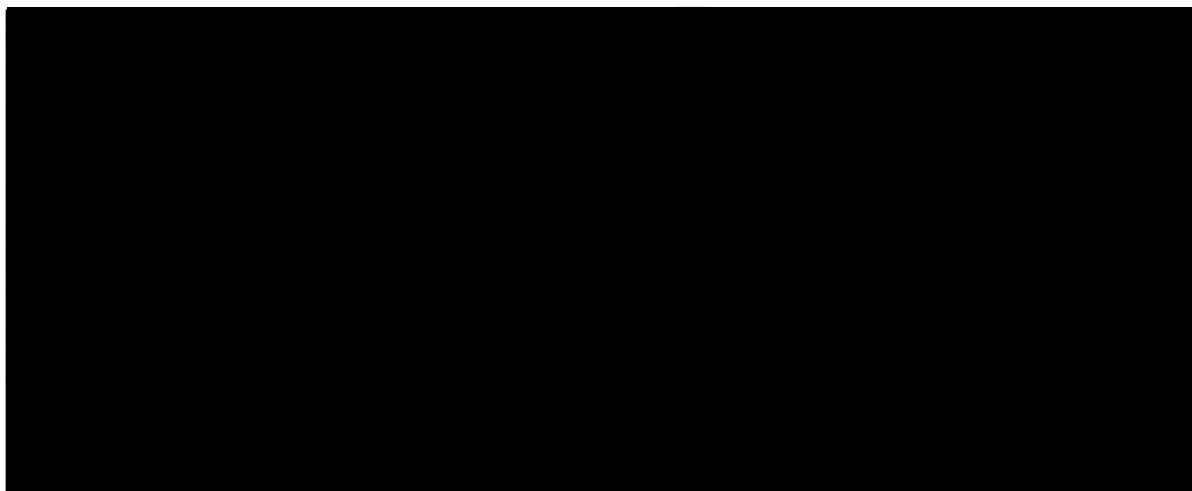
### Applications Received By Date

Report Run Date: 1/5/2018 10:31:16 AM

Date Forward Begin Date: 1/1/2018 7:00 AM

Date Forward End Date: 1/4/2018 10:00 PM

Date Forwarded	Total Applications
1/1/2018	28
1/2/2018	181
1/3/2018	169
1/4/2018	127



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## Licensing Division Weekly Report

### Automation Portal:

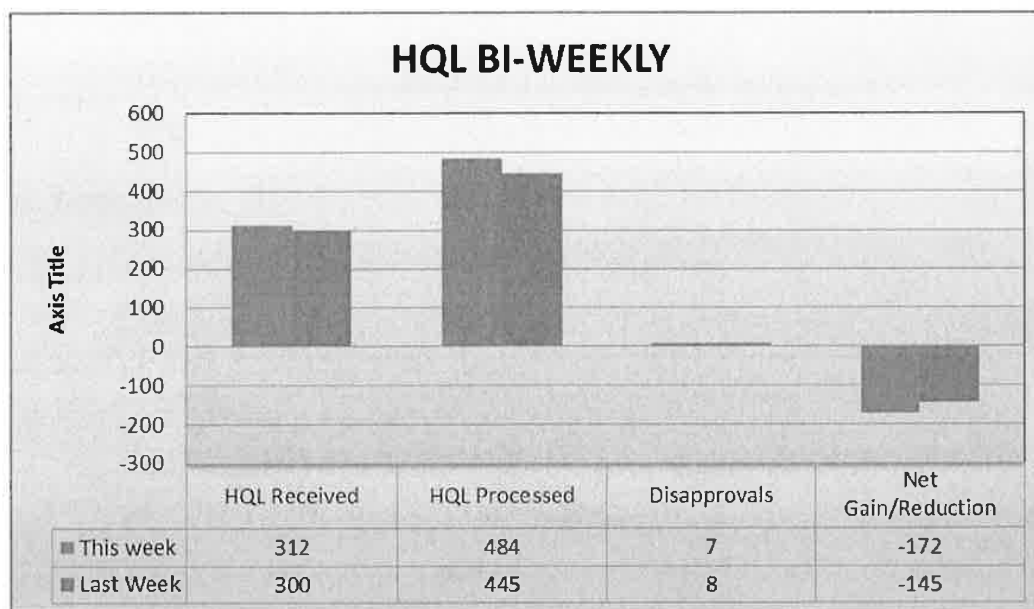
Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received and processed 52,356 applications, and 47,404 citizens have logged in and created an account.

### Vacancies and Hiring Status:

[REDACTED]

Handgun Qualification License: Total Active HQL's since 10/1/2013: 90,661

HQL Currently has (0) zero applications over 15 days.



HQL Chart Covers 12/29/17-1/4/18

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## Licensing Division Weekly Report

[REDACTED]	[REDACTED]	680	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
New	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
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[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

\*FRU and HQL numbers denote real time figures as of 1/12/2018

DHMH Import Status  
01/12/2018 Success

Days in Queue (Initial Review)  
(Not in Closed Status)

1 Day 14	2 Days 194	3 Days 169	4 Days 4	5 Days 0	6 Days 0	7 Days 0	Overdue 0
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VIEW DETAILS

Days in Queue (Second Review)  
(Not in Closed Status)

1 Day 0	2 Days 0	3 Days 0	4 Days 74	5 Days 28	6 Days 0	7 Days 1	Overdue 0
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VIEW DETAILS

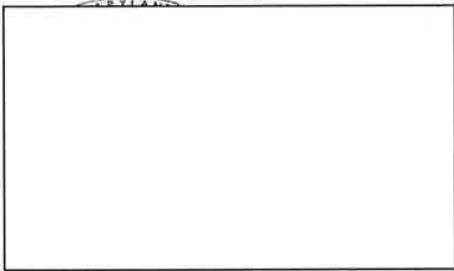
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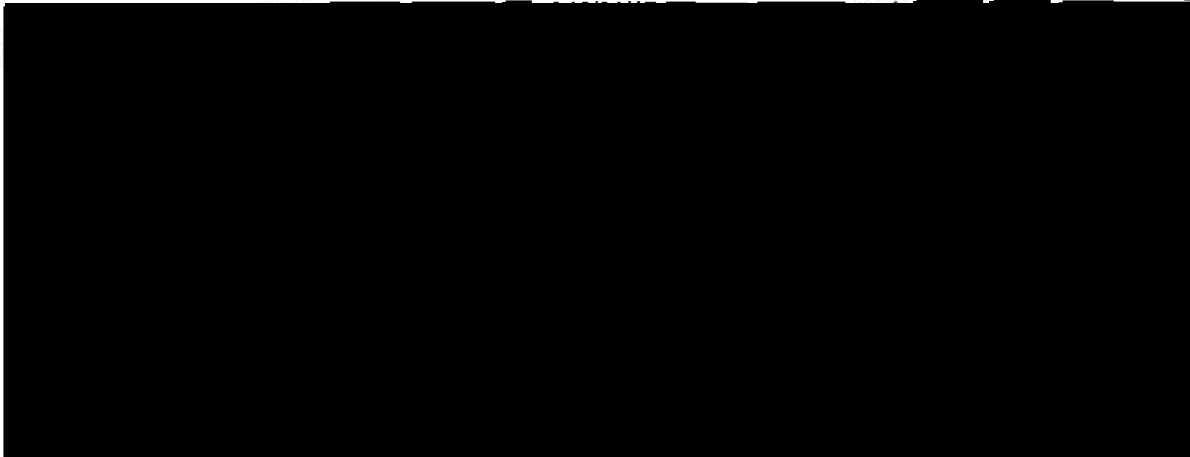
MSP003246

JA0136

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## Licensing Division Weekly Report



### Automation Portal:

Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received and processed 53,940 applications, and 48,041 citizens have logged in and created an account.

### Vacancies and Hiring Status:



### Handgun Qualification License: Total Active HQL's since 10/1/2013: 90,999

HQL Currently has (0) zero applications over 15 days.

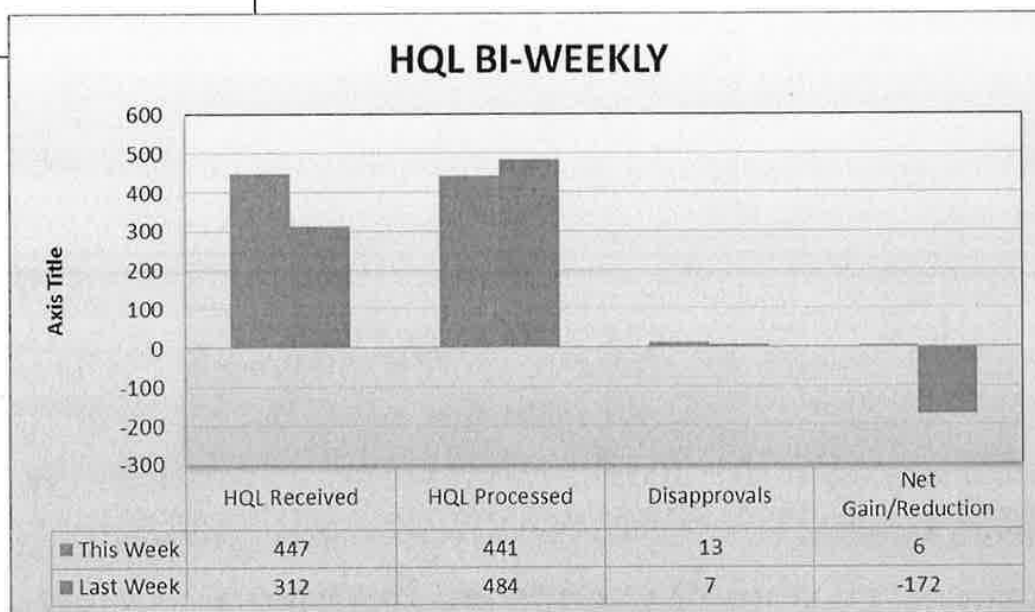
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## ing Division Weekly Report



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## ing Division Weekly Report

**Maryland Department of State Police / Licensing Division**  
**1111 Reisterstown Road**  
**Pikesville, Maryland**  
**Office: (410) 653.4500 / Fax: (410) 653.4036**

[illegible]

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## ing Division Weekly Report

[illegible]

**\*FRU and HQL numbers denote real time figures as of 1/19/2018**

DHMH Import Status  
01/19/2018 Success

Days in Queue (Initial Review)  
(Not in Closed Status)[VIEW DETAILS](#)Days in Queue (Second Review)  
(Not in Closed Status)[VIEW DETAILS](#)

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## Licensing Division Weekly Report

### Applications Received By Date

Report Run Date: 1/19/2018 10:50:21 AM

Date Forward Begin Date: 1/12/2018 7:00 AM

Date Forward End Date: 1/18/2018 10:00 PM

Date Forwarded	Total Applications
1/12/2018	175
1/13/2018	220
1/14/2018	83
1/15/2018	110
1/16/2018	134
1/17/2018	131
1/18/2018	140

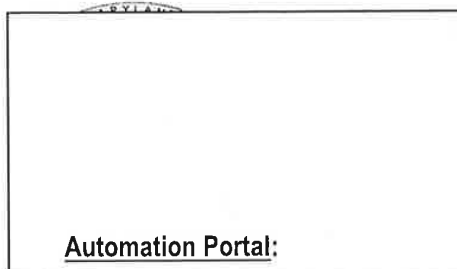
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## Licensing Division Weekly Report

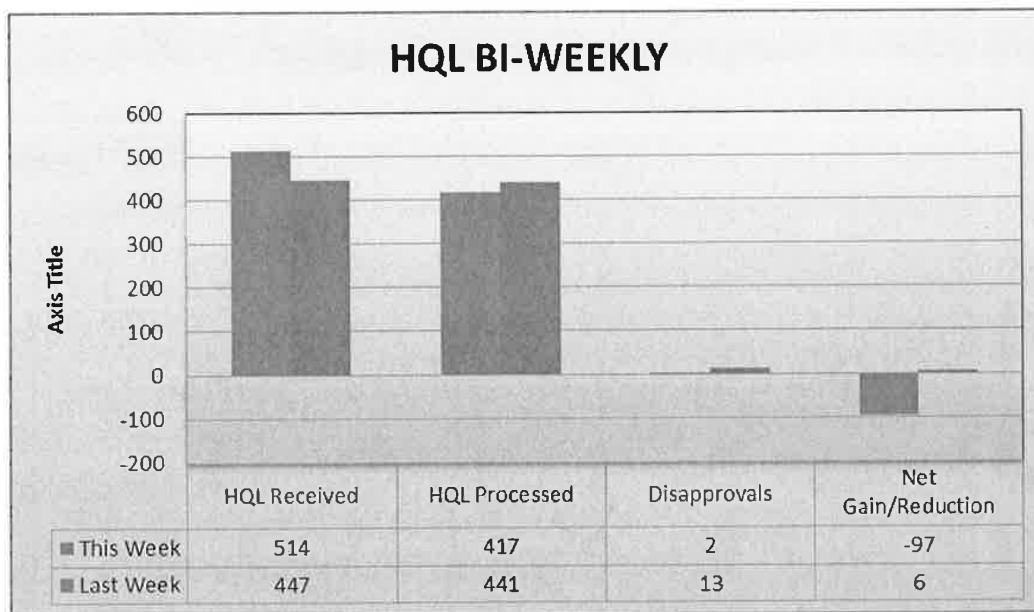
Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received and processed 56,517 applications, and 48,701 citizens have logged in and created an account.

### Vacancies and Hiring Status:



Handgun Qualification License: Total Active HQL's since 10/1/2013: 91,513

HQL Currently has (0) zero applications over 15 days.



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**Maryland Department of State Police / Licensing Division**  
**1111 Reisterstown Road**  
**Pikesville, Maryland**  
**Office: (410) 653.4500 / Fax: (410) 653.4036**

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## Licensing Division Weekly Report

[REDACTED]	[REDACTED]	680	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
New	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
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[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

\*FRU and HQL numbers denote real time figures as of 1/26/2018

DHMH Import Status  
01/26/2018 SuccessDays in Queue (Initial Review)  
(Not in Closed Status)

1 Day	2 Days	3 Days	4 Days	5 Days	6 Days	7 Days	Overdue
4	150	100	0	0	0	0	0

VIEW DETAILS

Days in Queue (Second Review)  
(Not in Closed Status)

1 Day	2 Days	3 Days	4 Days	5 Days	6 Days	7 Days	Overdue
0	0	20	88	15	0	0	0

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## Licensing Division Weekly Report

### Applications Received By Date

Report Run Date: 1/26/2018 9:08:09 AM

Date Forward Begin Date: 1/19/2018 7:00 AM

Date Forward End Date: 1/25/2018 10:00 PM

Date Forwarded	Total Applications
1/19/2018	144
1/20/2018	214
1/21/2018	38
1/22/2018	130
1/23/2018	165
1/24/2018	139
1/25/2018	146

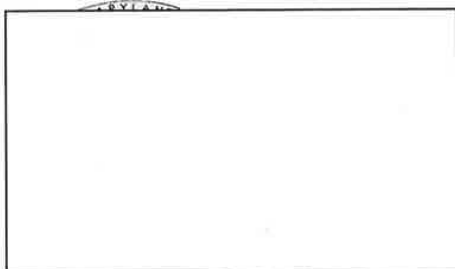
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## Licensing Division Weekly Report

### Automation Portal:

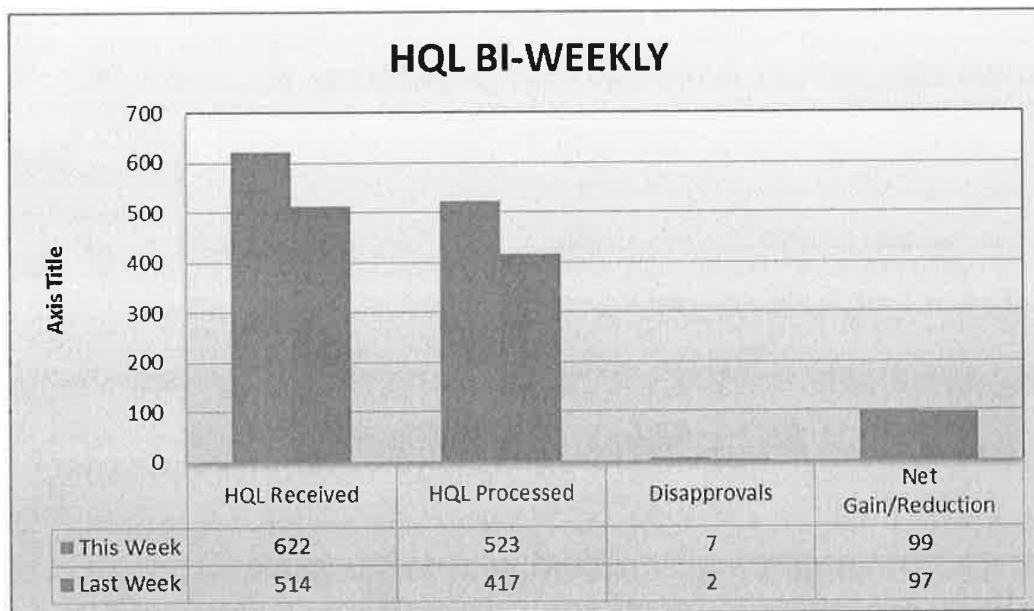
Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received and processed 60,070 applications, and 49,341 citizens have logged in and created an account.

### Vacancies and Hiring Status:



Handgun Qualification License: Total Active HQL's since 10/1/2013: 91,930

HQL Currently has (0) zero applications over 15 days.



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## Licensing Division Weekly Report

Maryland Department of State Police / Licensing Division  
 1111 Reisterstown Road  
 Pikesville, Maryland  
 Office: (410) 653.4500 / Fax: (410) 653.4036

Licensing Division Weekly (5) Report 1/26/2018 through 2/01/2018	2015 Totals	2016 Totals	2017 Totals	2018 Totals	2015 Weekly Avg.	2016 Weekly Avg.	2017 Weekly Avg.	2018 Weekly Avg.	Current Week Totals (2018)
*FRS Total Apps Received	37,646	52,434	51,851	4,603	710	1,008	997	920	1,050
*FRS Disapprovals	397	261	175	10	7	5	3.4	2	1
*HQL New	20,160	28,039	23,888	2,257	380	539	459	451	523
*HQL Disapprovals	333	574	566	49	6	11	10.9	9.8	22
██████████	██	██	██	██	█	█	█	█	█
██████████	██	██	██	██	█	█	█	█	█
██████████	██	██	██	█	█	█	█	█	█
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## ing Division Weekly Report

[illegible]

\*FRU and HQL numbers denote real time figures as of 2/2/2018

DHMH Import Status  
02/02/2018 Success

1 Day	2 Days	3 Days	4 Days	5 Days	6 Days	7 Days	Overdue
3	181	156	0	0	0	0	0

[VIEW DETAILS](#)

1 Day	2 Days	3 Days	4 Days	5 Days	6 Days	7 Days	Overdue
0	0	7	88	68	22	3	0

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Select a Report to View

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## Licensing Division Weekly Report

### Applications Received By Date

Report Run Date: 2/2/2018 9:33:42 AM

Date Forward Begin Date: 1/26/2018 7:00 AM

Date Forward End Date: 2/1/2018 10:00 PM

Date Forwarded	Total Applications
1/26/2018	186
1/27/2018	183
1/28/2018	50
1/29/2018	119
1/30/2018	158
1/31/2018	171
2/1/2018	180

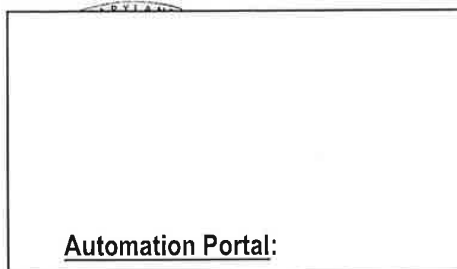
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## Licensing Division Weekly Report

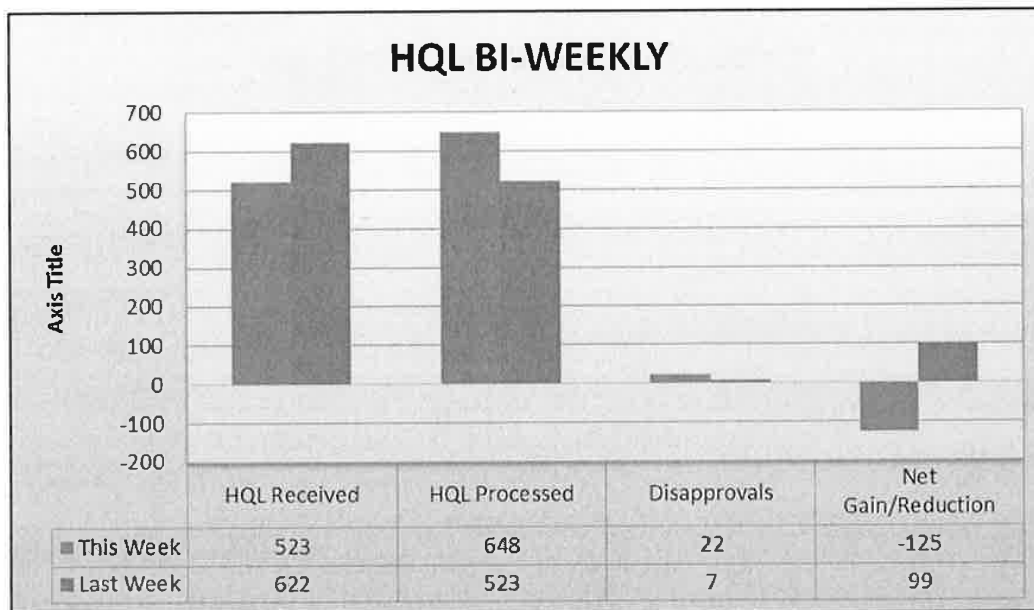
Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received and processed 64,673 applications, and 50,050 citizens have logged in and created an account.

### Vacancies and Hiring Status:



Handgun Qualification License: Total Active HQL's since 10/1/2013: 92,556

HQL Currently has (0) zero applications over 15 days.



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## ing Division Weekly Report

**Maryland Department of State Police / Licensing Division**  
**1111 Reisterstown Road**  
**Pikesville, Maryland**  
**Office: (410) 653.4500 / Fax: (410) 653.4036**

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## ing Division Weekly Report

[illegible]

**\*FRU and HQL numbers denote real time figures as of 2/9/2018**

Days in Queue (Initial Review)  
(Not in Closed Status)[VIEW DETAILS](#)Days in Queue (Second Review)  
(Not in Closed Status)[VIEW DETAILS](#)

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## Licensing Division Weekly Report

# Applications Received By Date

Report Run Date: 2/9/2018 8:50:00 AM

Date Forward Begin Date: 2/2/2018 7:00 AM

Date Forward End Date: 2/8/2018 10:00 PM

Date Forwarded	Total Applications
2/2/2018	183
2/3/2018	243
2/4/2018	52
2/5/2018	140
2/6/2018	144
2/7/2018	137
2/8/2018	199

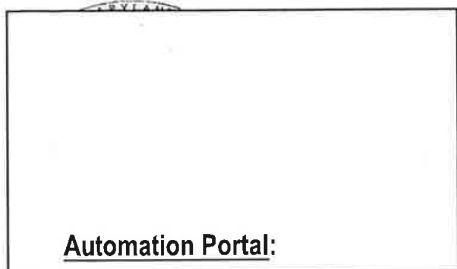
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## Licensing Division Weekly Report

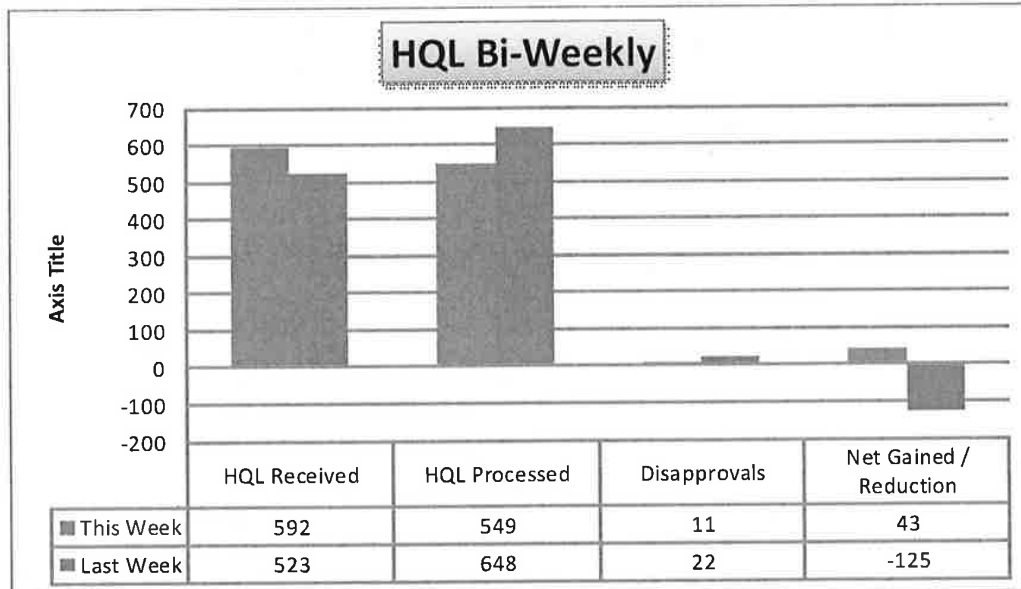
Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received 57,535 applications, and 50,777 citizens have logged in and created an account.

### Vacancies and Hiring Status:

[REDACTED]

Handgun Qualification License: Total Active HQL's since 10/1/2013: 93,094

HQL Currently has (0) zero applications over 15 days.



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## Licensing Division Weekly Report

[REDACTED]	[REDACTED]	680	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
New	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
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[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

\*FRU and HQL numbers denote real time figures as of 2/16/2018

Days in Queue (Initial Review)  
(Not in Closed Status)

1 Day	2 Days	3 Days	4 Days	5 Days	6 Days	7 Days	Overdue
0	197	131	146	64	0	0	0

VIEW DETAILS

Days in Queue (Second Review)  
(Not in Closed Status)

1 Day	2 Days	3 Days	4 Days	5 Days	6 Days	7 Days	Overdue
0	0	1	0	50	29	5	0

VIEW DETAILS

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## Licensing Division Weekly Report

# Applications Received By Date

Report Run Date: 2/16/2018 6:51:45 AM

Date Forward Begin Date: 2/9/2018 7:00 AM

Date Forward End Date: 2/15/2018 10:00 PM

Date Forwarded	Total Applications
2/9/2018	217
2/10/2018	246
2/11/2018	56
2/12/2018	152
2/13/2018	147
2/14/2018	132
2/15/2018	197

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## Licensing Division Weekly Report

### Automation Portal:

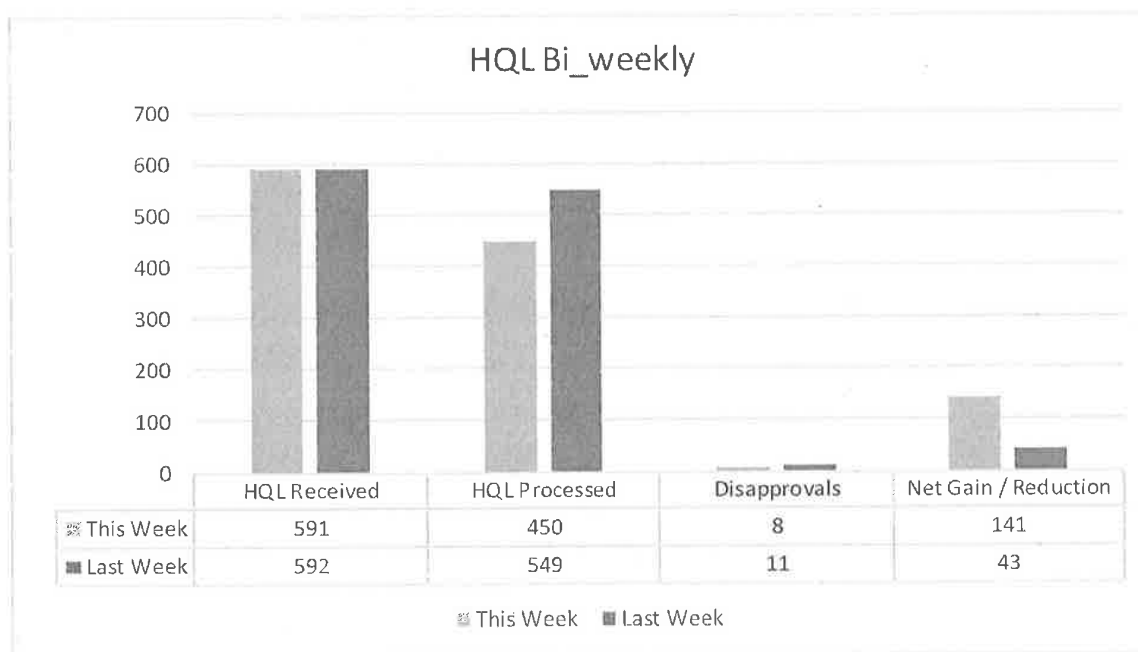
Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received 58,674 applications, and 51,958 citizens have logged in and created an account.

### Vacancies and Hiring Status:

[REDACTED]

Handgun Qualification License: Total Active HQL's since 10/1/2013: 93,536

HQL Currently has (0) zero applications over 15 days.

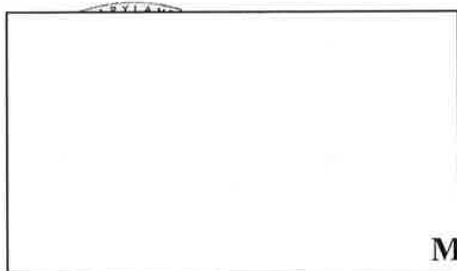


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## ing Division Weekly Report

**Maryland Department of State Police / Licensing Division**  
**1111 Reisterstown Road**  
**Pikesville, Maryland**  
**Office: (410) 653.4500 / Fax: (410) 653.4036**

[illegible]

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## ing Division Weekly Report

[illegible]

\*FRU and HQL numbers denote real time figures as of 3/2/2018

Days in Queue (Initial Review)  
(Not in Closed Status)[VIEW DETAILS](#)Days in Queue (Second Review)  
(Not in Closed Status)[VIEW DETAILS](#)

For the week of **2-23-2018 to 3-1-2018** the average processing time for **FRU** applications from acceptance to final disposition is: Total **4.63 Days**, Initial Review Only: **4.03 days**, second review **5.18 Days**

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**Licensing Division Weekly Report**

# Applications Received By Date

Report Run Date: 3/2/2018 5:38:46 AM

Date Forward Begin Date: 2/23/2018 7:00 AM

Date Forward End Date: 3/1/2018 10:00 PM

Date Forwarded	Total Applications
2/23/2018	314
2/24/2018	266
2/25/2018	55
2/26/2018	153
2/27/2018	237
2/28/2018	238
3/1/2018	249

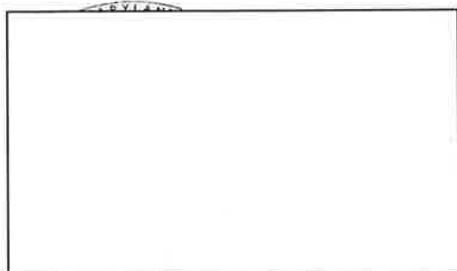
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## Licensing Division Weekly Report

### Automation Portal:

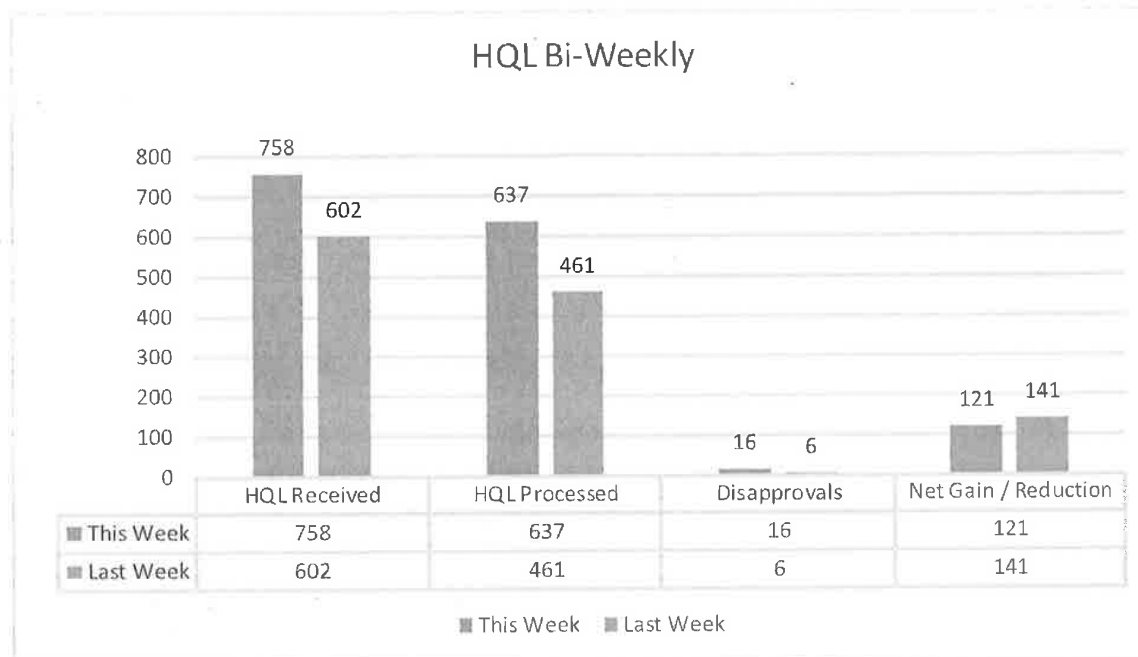
Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received 61,212 applications, and 53,681 citizens have logged in and created an account.

### Vacancies and Hiring Status:



Handgun Qualification License: Total Active HQL's since 10/1/2013: 94,612

HQL Currently has (0) zero applications over 15 days.



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## ing Division Weekly Report

**Maryland Department of State Police / Licensing Division**  
**1111 Reisterstown Road**  
**Pikesville, Maryland**  
**Office: (410) 653.4500 / Fax: (410) 653.4036**

[illegible]

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## ing Division Weekly Report

[illegible]

\*FRU and HQL numbers denote real time figures as of 3/9/2018

Days in Queue (Initial Review)  
(Not in Closed Status)[VIEW DETAILS](#)Days in Queue (Second Review)  
(Not in Closed Status)[VIEW DETAILS](#)

For the week of **3-2-2018 to 3-8-2018** the average processing time for **FRU** applications from acceptance to final disposition is: Total **4.93** Days, Initial Review Only: **4.43** days, second review **5.38** Days

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**ing Division Weekly Report**

# **Applications Received By Date**

Report Run Date: 3/9/2018 5:39:09 AM

Date Forward Begin Date: 3/2/2018 7:00 AM

Date Forward End Date: 3/8/2018 10:00 PM

Date Forwarded	Total Applications
3/2/2018	264
3/3/2018	321
3/4/2018	78
3/5/2018	205
3/6/2018	238
3/7/2018	231
3/8/2018	222

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## Licensing Division Weekly Report

### Automation Portal:

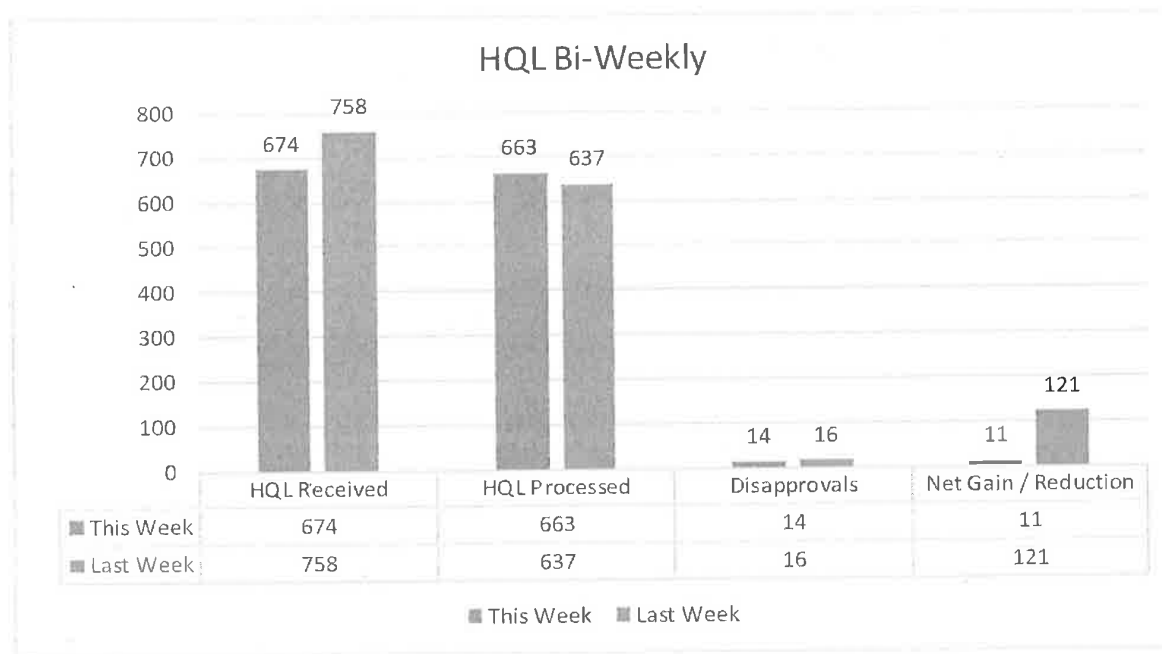
Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received 62786 applications, and 54,742 citizens have logged in and created an account.

### Vacancies and Hiring Status:



Handgun Qualification License: Total Active HQL's since 10/1/2013: 95,261

HQL Currently has (0) zero applications over 15 days.



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## ing Division Weekly Report

Maryland Department of State Police / Licensing Division

**1111 Reisterstown Road**

## Pikesville, Maryland

**Office: (410) 653.4500 / Fax: (410) 653.4036**

Licensing Division Weekly (11) Report 3/9/2018 through 3/15/2018	2015 Totals	2016 Totals	2017 Totals	2018 Totals	2015 Weekly Avg.	2016 Weekly Avg.	2017 Weekly Avg.	2018 Weekly Avg.	Current Week Totals (2018)
*FRS Total Apps Received	37,646	52,434	51,851	11725	710	1,008	997	1065.9	1229
*FRS Disapprovals	397	261	175	20	7	5	3.4	1.82	1
*HQL New	20,160	28,039	23,888	6229	380	539	459	566.3	755
*HQL Disapprovals	333	574	566	117	6	11	10.9	10.6	13
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## ing Division Weekly Report

[illegible]

\*FRU and HQL numbers denote real time figures as of 3/16/2018

Days in Queue (Initial Review)  
(Not in Closed Status)[VIEW DETAILS](#)Days in Queue (Second Review)  
(Not In Closed Status)[VIEW DETAILS](#)

For the week of **3-9-2018 to 3-15-2018** the average processing time for **FRU** applications from acceptance to final disposition is: Total **5.11** Days, Initial Review Only: **4.35** days, second review **5.91** Days

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**ing Division Weekly Report**

# Applications Received By Date

Report Run Date: 3/16/2018 5:53:50 AM

Date Forward Begin Date: 3/9/2018 7:00 AM

Date Forward End Date: 3/15/2018 10:00 PM

Date Forwarded	Total Applications
3/9/2018	288
3/10/2018	289
3/11/2018	73
3/12/2018	153
3/13/2018	215
3/14/2018	209
3/15/2018	235

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## Licensing Division Weekly Report

### Automation Portal:

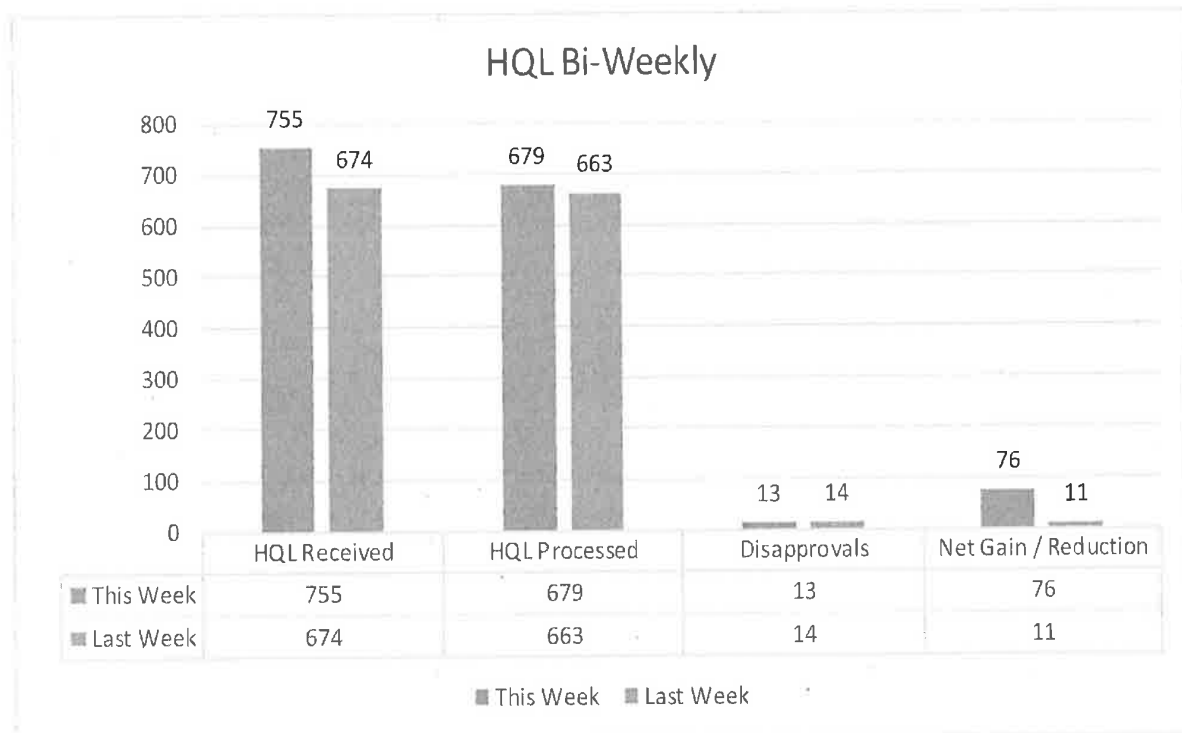
Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received 64,222 applications, and 55,742 citizens have logged in and created an account.

### Vacancies and Hiring Status:



Handgun Qualification License: Total Active HQL's since 10/1/2013: 95,927

HQL Currently has (0) zero applications over 15 days.



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# MARYLAND STATE POLICE

# Licensing Division Weekly Report

**Maryland Department of State Police / Licensing Division**

**1111 Reisterstown Road**

## Pikesville, Maryland

**Office: (410) 653.4500 / Fax: (410) 653.4036**

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# MARYLAND STATE POLICE

## Licensing Division Weekly Report

Licensing Division Weekly (12) Report 3/16/2018 through 3/22/2018 (Cont)	2015 Totals	2016 Totals	2017 Totals	2018 Totals	2015 Weekly Avg.	2016 Weekly Avg.	2017 Weekly Avg.	2018 Weekly Avg.	Current Week Totals (2018)
Private Detective-									
[REDACTED]									
[REDACTED]									
[REDACTED]									
[REDACTED]									
[REDACTED]									
[REDACTED]									
[REDACTED]									
[REDACTED]									
[REDACTED]									
[REDACTED]									
[REDACTED]									

**\*FRU and HQL numbers denote real time figures as of 3/23/2018**

Days in Queue (Initial Review)  
(Not in Closed Status)



[VIEW DETAILS](#)

Days in Queue (Second Review)  
(Not in Closed Status)



[VIEW DETAILS](#)

For the week of **3-16-2018 to 3-22-2018** the average processing time for **FRU** applications from acceptance to final disposition is: Total **4.6** Days, Initial Review Only: **4.03** days, second review **5.13** Days

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# MARYLAND STATE POLICE

## Licensing Division Weekly Report

### Applications Received By Date

Report Run Date: 3/23/2018 5:39:30 AM

Date Forward Begin Date: 3/16/2018 7:00 AM

Date Forward End Date: 3/22/2018 10:00 PM

Date Forwarded	Total Applications
3/16/2018	318
3/17/2018	242
3/18/2018	61
3/19/2018	185
3/20/2018	196
3/21/2018	68
3/22/2018	218

Total Active Wear and Carry Permit Holders as of 3/2/18 (Will be updated each month when next MAFSS

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# MARYLAND STATE POLICE

## Licensing Division Weekly Report

### Automation Portal:

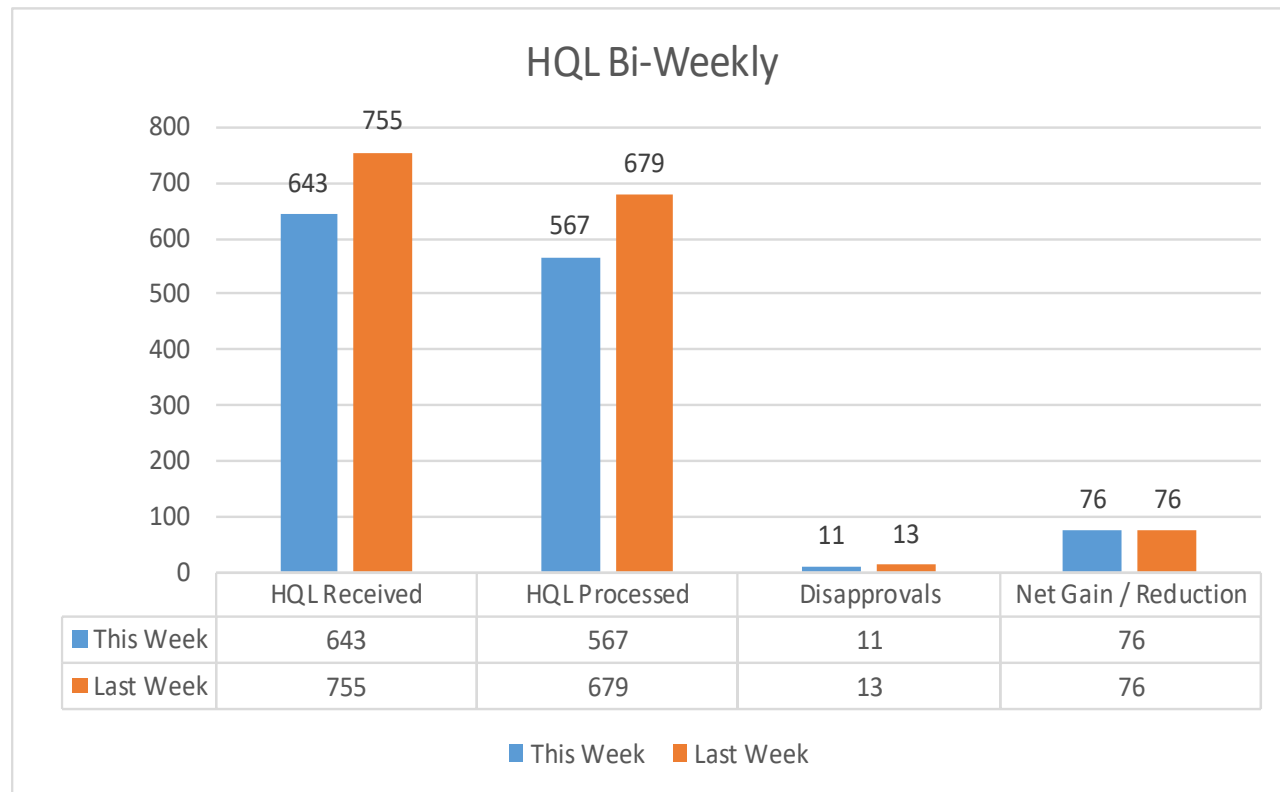
Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received 65,498 applications, and 56,574 citizens have logged in and created an account.

### Vacancies and Hiring Status:



Handgun Qualification License: Total Active HQL's since 10/1/2013: 96,483

HQL Currently has (0) zero applications over 15 days.



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# MARYLAND STATE POLICE

# Licensing Division Weekly Report

**Maryland Department of State Police / Licensing Division**

**1111 Reisterstown Road**

## Pikesville, Maryland

**Office: (410) 653.4500 / Fax: (410) 653.4036**

Licensing Division Weekly (13) Report 3/23/2018 through 3/29/2018	2015 Totals	2016 Totals	2017 Totals	2018 Totals	2015 Weekly Avg.	2016 Weekly Avg.	2017 Weekly Avg.	2018 Weekly Avg.	Current Week Totals (2018)
*FRS Total Apps Received	37,646	52,434	51,851	15,366	710	1,008	997	1,182	1506
*FRS Disapprovals	397	261	175	50	7	5	3.4	3.8	0
*HQL New	20,160	28,039	23,888	7,573	380	539	459	582.5	701
*HQL Disapprovals	333	574	566	140	6	11	10.9	10.7	12
██████████	██	██	██	██	█	█	█	██	█
██████████	██	██	██	██	█	█	█	█	█
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# MARYLAND STATE POLICE

## Licensing Division Weekly Report

Licensing Division Weekly (12) Report 3/23/2018 through 3/29/2018 (Cont)	2015 Totals	2016 Totals	2017 Totals	2018 Totals	2015 Weekly Avg.	2016 Weekly Avg.	2017 Weekly Avg.	2018 Weekly Avg.	Current Week Totals (2018)
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■
[REDACTED]	■	■	■	■	■	■	■	■	■

**\*FRU and HQL numbers denote real time figures as of 3/29/2018**

Days in Queue (Initial Review)  
(Not in Closed Status)

1 Day 5	2 Days 232	3 Days 212	4 Days 245	5 Days 76	6 Days 0	7 Days 0	Overdue 0
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[VIEW DETAILS](#)

Days in Queue (Second Review)  
(Not in Closed Status)

1 Day 0	2 Days 0	3 Days 0	4 Days 0	5 Days 35	6 Days 0	7 Days 1	Overdue 0
------------	-------------	-------------	-------------	--------------	-------------	-------------	--------------

[VIEW DETAILS](#)

For the week of **3-23-2018 to 3-29-2018** the average processing time for **FRU** applications from acceptance to final disposition is: Total **4.77** Days, Initial Review Only: **4.17** days, second review **5.33** Days.

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# MARYLAND STATE POLICE

## Licensing Division Weekly Report

### Applications Received By Date

Report Run Date: 3/30/2018 9:33:49 AM

Date Forward Begin Date: 3/23/2018 7:00 AM

Date Forward End Date: 3/29/2018 10:00 PM

Date Forwarded	Total Applications
3/23/2018	291
3/24/2018	289
3/25/2018	51
3/26/2018	179
3/27/2018	247
3/28/2018	212
3/29/2018	233

[REDACTED]

[REDACTED]

#### Automation Portal:

Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received 67,212 applications, and 57,541 citizens have logged in and created an account.

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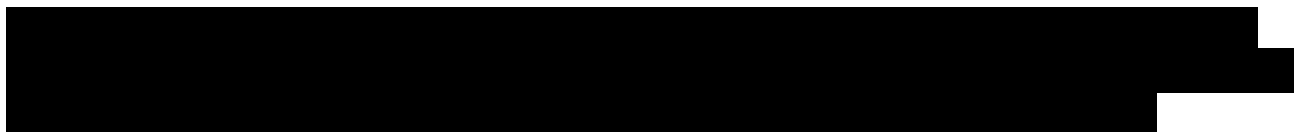
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# MARYLAND STATE POLICE

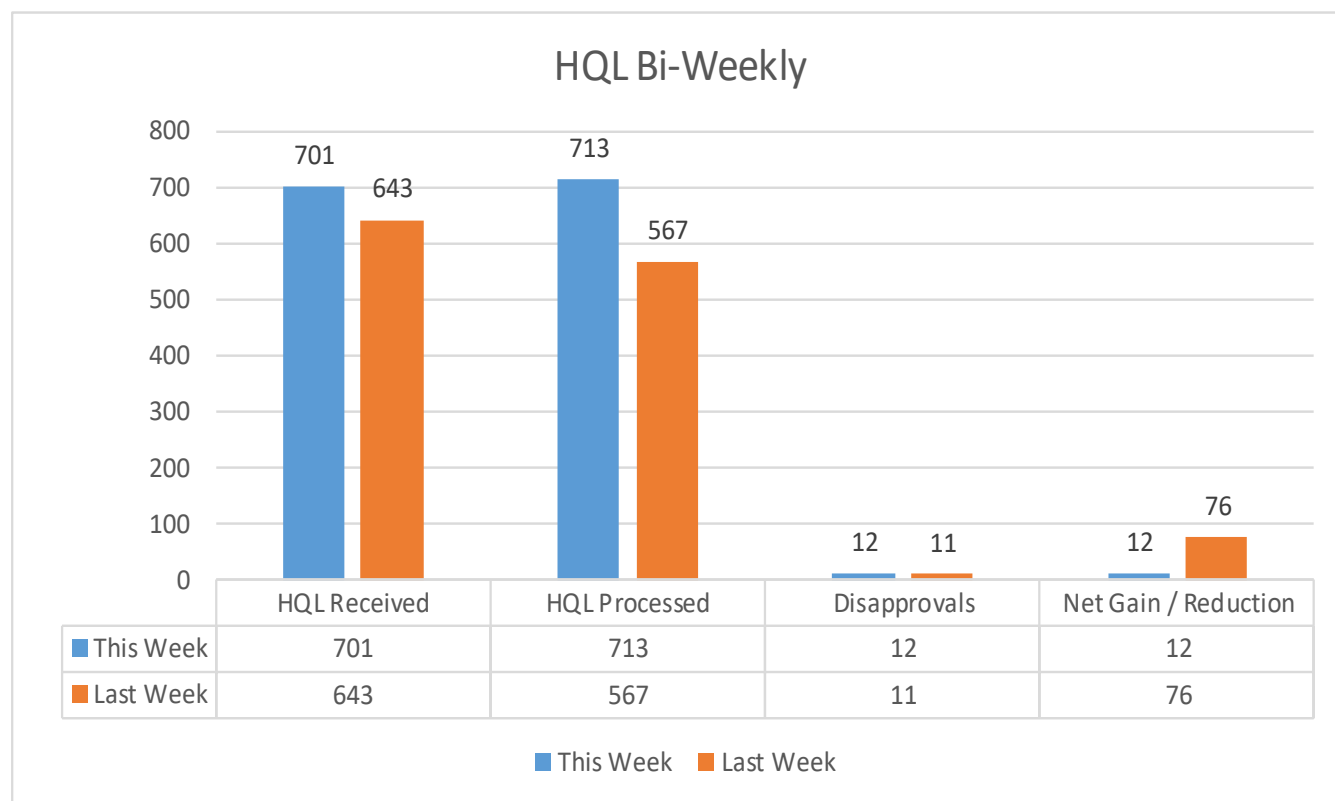
## Licensing Division Weekly Report

### Vacancies and Hiring Status:



Handgun Qualification License: Total Active HQL's since 10/1/2013: 97,094

HQL Currently has (1) one application over 15 days.



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# MARYLAND STATE POLICE

# Licensing Division Weekly Report

**Maryland Department of State Police / Licensing Division**

**1111 Reisterstown Road**

## Pikesville, Maryland

**Office: (410) 653.4500 / Fax: (410) 653.4036**

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# MARYLAND STATE POLICE

# Licensing Division Weekly Report

[illegible]

**\*FRU and HQL numbers denote real time figures as of 4/6/2018**

Days in Queue (Initial Review)  
(Not in Closed Status)[VIEW DETAILS](#)Days in Queue (Second Review)  
(Not in Closed Status)[VIEW DETAILS](#)

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# MARYLAND STATE POLICE

## Licensing Division Weekly Report

### Applications Received By Date

Report Run Date: 4/6/2018 6:47:18 AM

Date Forward Begin Date: 3/30/2018 7:00 AM

Date Forward End Date: 4/5/2018 10:00 PM

Date Forwarded	Total Applications
3/30/2018	263
3/31/2018	219
4/1/2018	13
4/2/2018	165
4/3/2018	210
4/4/2018	181
4/5/2018	182

[REDACTED]

[REDACTED]

#### Automation Portal:

Licensing Portal launched on 1/1/2017. To date the Licensing Portal has received 68,435 applications, and 58,288 citizens have logged in and created an account.

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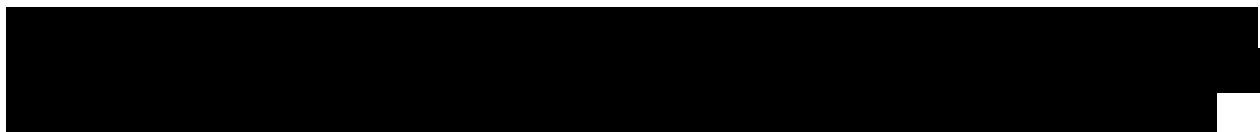
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# MARYLAND STATE POLICE

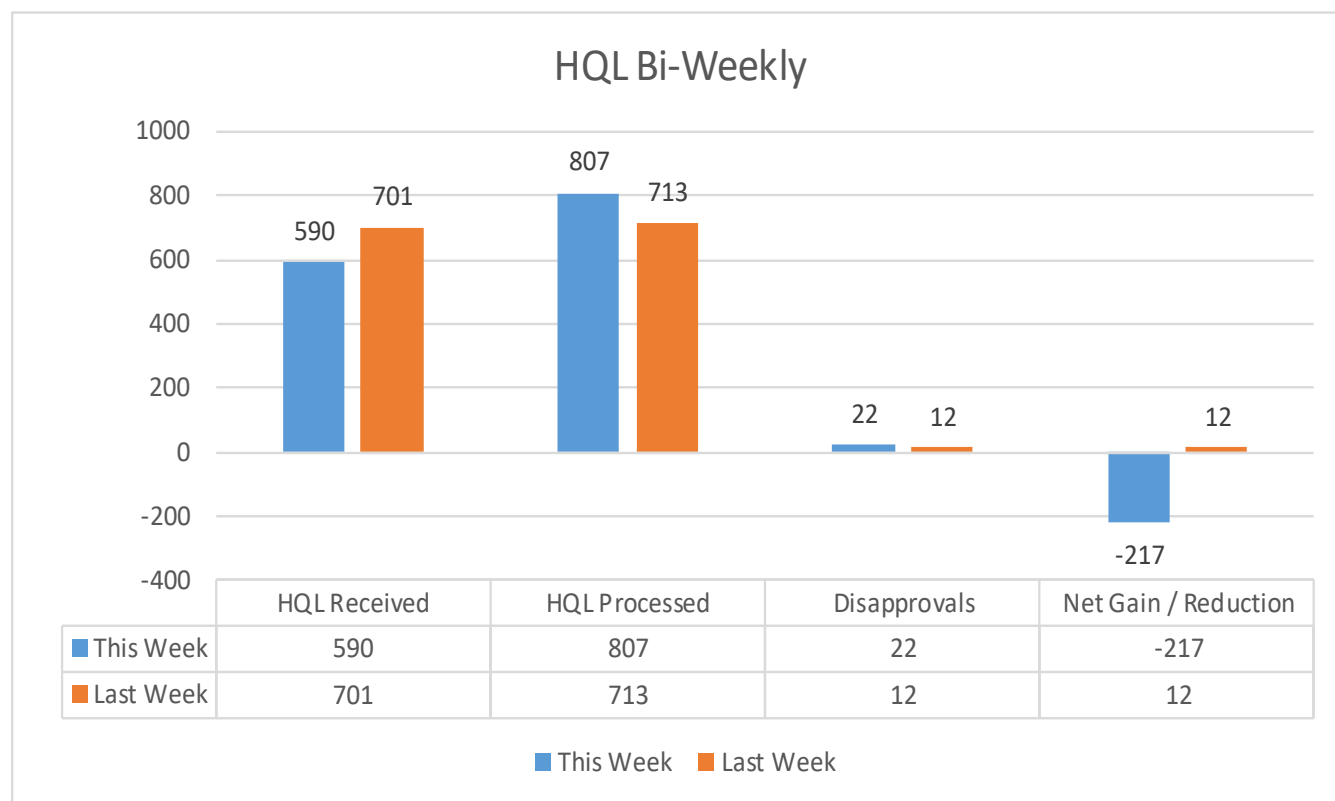
## Licensing Division Weekly Report

### Vacancies and Hiring Status:



Handgun Qualification License: Total Active HQL's since 10/1/2013: 97,879

HQL Currently has (0) applications over 15 days.



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JA0182

Case 1:16-cv-03311-ELH Document 125-7 Filed 11/25/20 Page 63 of 104

## **Declaration Exhibit 2**

 <b>Licensing Division</b> <b>STANDARD OPERATING PROCEDURE</b> 			
<b>Processing of Qualified Handgun Qualification License Applications</b>			
<b>Distribution:</b>	Licensing Division	<b>Index:</b>	29-1403
<b>Responsible Unit:</b>	HQL Unit	<b>Rescinds:</b>	None
<b>DLI Program:</b>	DLI#	<b>MD Code:</b>	COMAR
<b>Issued:</b>	10/01/2013	<b>Revised:</b>	N/A
		<b>Reviewed:</b>	N/A
		<b>Next Review:</b>	10/01/2014

**.01 Purpose**

To delineate policy and procedures for the processing of applications for the Handgun Qualification License in accordance with Public Safety Title 5(117.1) (Firearms Safety Act of 2013) and COMAR 29.03.01.

**.02 Policy**

The Maryland State Police will, to the best of their ability, process all Applications for Handgun Qualification Licenses (HQL) in compliance with State and Federal laws and regulations; will conduct the most effective and comprehensive background checks possible to determine eligibility to obtain a HQL; and will maintain quality control checks on processed HQL applications.

**.03 References**

Annotated Code of Maryland, Public Safety Title 5,  
 Annotated Code of Maryland, Criminal Law Title 4,  
 Criminal Law Title 4, Code of Maryland Regulations (COMAR) Title 29.

**.04 Required Fees**

- A. HQL Standard-\$50
- B. HQL Training Exempt-\$50
- C. HQL Permit Exempt- No Fee
- D. Replacement Card- \$20
- E. HQL Renewal-\$20
- F. New Resident-\$15
- G. Qualified Handgun Instructor- No Fee

**.05 Background**

- A. Firearms Safety Act of 2013 provides for the prohibition of certain assault weapons and bans the sale of gun magazines that have a capacity of more than 10 rounds of ammunition; requires a person selling, purchasing, renting, transferring, or receiving a certain regulated firearm possess

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## Handgun Qualification License Duties and Responsibilities

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a handgun qualification license (providing for certain exceptions to the requirements, i.e. active or retired military and police with valid credentials) and requires within 90 days of establishing permanent residency, a new resident to register regulated firearms.

- B. The Firearms Services Section & Licensing Division is responsible for processing applications for the Handgun Qualification Licenses and the Qualified Handgun Instructor Licenses and/or Certificates. The application is used to record the application and subsequent sale, rental or transfer of a regulated firearm by a person licensed as a regulated firearms dealer; record the application and subsequent sale, rental or transfer of a regulated firearm between persons who are not licensed as regulated firearms dealers (secondary sales); record a gift of a regulated firearm from one immediate family member to another; and record the voluntary registration of a regulated firearm.

### **.06 Definitions**

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- A. **Adjudicated Delinquent** - An act that was found to be a delinquent act, as defined in Courts and Judicial Proceedings Article, §3-801(k), Annotated Code of Maryland, at an adjudicatory hearing, as defined in Courts and Judicial Proceedings Article, §3-801(b), Annotated Code of Maryland.
- B. **Application and Affidavit to Purchase a Regulated Firearm** - The Secretary shall adopt an application form(s) to be used by an individual who desires to sell, rent, transfer or voluntarily register a regulated firearm. The forms are as follows:
1. MSP 77R-1 Part 1 page 1 (10-2013) of the Application to Purchase a Regulated Firearm.
  2. MSP 77R-1 Part 1 page 2 (10-2013) of the Application to Purchase a Regulated Firearm.
  3. MSP 77R- 2 (10-2013) of the Application to Purchase a Regulated Firearm.
  4. MSP 77C – (10-2013) Continuation Application & Affidavit to Purchase Multiple Regulated Firearms.
  5. MSP 77M – (10-2013) Application for a Multiple Purchase of a Regulated Firearms.
  6. MSP 77D- Application for Mandatory Registration of Regulated Firearms.

### **~~C. Application Fees~~**

- ~~1.) A processing fee of \$50.00 is required for the Handgun Qualification License.~~
- ~~2.) A renewal fee of \$20 is required for the Handgun Qualification License after its 10 year expiration.~~
- ~~3.) A replacement fee of \$20 is required for the replacement of any lost, stolen, or misplaced Handgun Qualification Licenses.~~
- ~~2.) A processing fee of \$15.00 is required for the Application for Mandatory Registration of Regulated Firearm (77D).~~

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**Handgun Qualification License Duties and Responsibilities**

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- D. Background Investigation – A computerized investigation conducted by members of the Handgun Qualification License Unit (HQLU) to determine an applicant's eligibility, based on State and Federal laws and regulations, to purchase a regulated firearm and to determine the status of the firearm, stolen or wanted.

The computer databases queried are as follows:

1. Computerized Criminal History (CCH) - The Computerized Criminal History (CCH) System is the State Central Repository for data on subjects arrested for felony and misdemeanors.
2. Criminal Justice Information System (CJIS) - A computerized state fingerprint supported Criminal Justice Information System; a counterpart to the FBI's National Crime Information Center (NCIC) which offers a much wider range of information nationwide and the opportunity for a more precise inquiry search than NCIC, capturing charged and adjudicated individuals.
3. Criminal History Record Information (CHRI) – A computerized Criminal History Record Information System that offers data initiated or collected by a criminal justice agency on a person pertaining to reportable events such as arrests, convictions and incarcerations. It does not include court records of public judicial proceedings, but prepares a chronological criminal history for an offender.
4. Maryland Department of Health and Mental Hygiene (DHMH) – A computer database maintained by DHMH containing only those individuals who are prohibited by Maryland law from purchasing or possessing a regulated firearm due to a mental health-related issue.
5. Maryland Department of Parole and Probation (DPP) – A computer database maintained by DPP providing background on supervised probationers and parolees who are serving or completing court imposed sentences in the community and those awaiting trial as pre-trial detainees, inmates and parolees.
6. Maryland Department of Juvenile Services (DJS) – A computer database maintained by DJS known as the Automated Statewide System of Information Supported Tools (ASSIST) that contains information on individuals younger than 30 years old at the time of application and have been adjudicated delinquent by a juvenile court for a prohibiting offense.
7. Maryland District Court Judicial Information System (JIS) – A computerized database maintained by the District Court of Maryland that contains information originating within the Maryland District Court system and the Circuit Court of Baltimore City in reference to the following:
  - a. Criminal Arrest Warrants and summons obtained through the District Court, and
  - b. Criminal charges and district court dispositions.

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## **Handgun Qualification License Duties and Responsibilities**

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8. Maryland Automated Firearms Services System (MAFSS) – A computer database developed, maintained and updated to provide real time regulated firearm purchases and transfer information to law enforcement and criminal justice agencies in furtherance of their official responsibilities.
9. Maryland Motor Vehicle Administration (MVA) – A computer database utilized to determine state residence, validity of the identification supplied [USC Chapter 44, Section 922(t) (c)], proper identifiers and the existence of alcohol offenses and dispositions.
10. National Crime Information Center (NCIC) - The United States' central database for tracking crime-related information that is interlinked with similar systems that each state maintains. NCIC makes available a variety of records to include:
  - a. Persons with active arrest warrants,
  - b. Missing persons,
  - c. Persons with active (final) protection orders,
  - d. Violent gang organizations and membership,
  - e. Terrorist organizations and membership,
  - f. Secret Service protective alerts,
  - g. Convicted Sex Offenders,
  - h. Foreign Fugitives,
  - i. Immigration violators,
  - j. Parolees or people on Supervised Release,
  - k. Firearms records, including lost or missing firearms, and
  - l. Stolen property.
11. National Instant Check System (NICS) – A computerized system that checks available records in the National Crime Information Center (NCIC), the Interstate Identification Index (III) and the NICS Index to determine if prospective transferees are disqualified from receiving firearms.
  - a. National Instant Check System Index – A computerized source of records provided by local, state and federal agencies about persons prohibited from receiving firearms under federal law. All records in the NICS Index are federally disqualifying records and will prohibit the applicant from receiving firearms. The categories are as follows:
    - i. Illegal Aliens or those in the country illegally,



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## Handgun Qualification License Duties and Responsibilities

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- ii. Individuals who have renounced their citizenship,
    - iii. Individuals adjudicated mentally defective or committed to a mental institution,
    - iv. Individuals dishonorably discharged from the United States armed forces,
    - v. Unlawful users of or those addicted to controlled substances, and
    - vi. Individuals disqualified and record not in NCIC, III or NIC Index
  - b. NICS Delay- an open transaction (non-canceled transaction) where a final determination in the investigation of the applicant has not been made. Continued research is necessary to determine if the applicant has prohibiting offenses. This response is sent to NICS in response to the NTN Number that is provided to the POC.
  - c. NICS Denied – a denial of a firearm transfer based on the background investigation performed by the POC (State). This response is sent to NICS when a prohibitive offense has been determined against the applicant.
  - d. NICS Proceed – the transaction showing that no prohibitive offenses have been located in reference to the applicant. The license may be issued. This response is sent to NICS after the background check has been completed and no other prohibitions exist.
  - e. POC (Point of Contact) – The state of Maryland is the point of contact for NICS transactions on all regulated firearms and Handgun Qualification Licenses.
  - 12. Interstate Identification Index (III) – NCIC Triple I is defined as the cooperative federal-state system (index-pointer) for the exchange of criminal history records, and includes the National Identification Index (NII), the National Fingerprint File (NFF), and, to the extent of their participation in such system, the criminal history record repositories of the states and the FBI.
  - ~~E. Dealer – Any person who is engaged in the business of: selling, renting or transferring firearms at wholesale or retail; or repairing firearms.~~
  - F. Common Law - A system of law that is derived from judges' decisions (which arise from the judicial branch of government), rather than statutes or constitutions (which are derived from the legislative branch of government).
  - G. Conviction – A plea or verdict of guilty, a plea of Nolle Contendre, or a plea of Probation before Judgment when associated with crimes of violence or a crime designated as domestic violence, except when associated with 2<sup>nd</sup> degree assault.
  - H. Crime of violence means:
    - 1. Abduction,
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## **Handgun Qualification License Duties and Responsibilities**

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2. Arson in the first degree,
  3. Assault in the first or second degree,
  4. Burglary in the first, second or third degree,
  5. Carjacking and armed carjacking,
  6. Escape in the first degree,
  7. Kidnapping,
  8. Voluntary manslaughter,
  9. Maiming as previously prescribed under former Article 27, § 386 of the Code,
  10. Mayhem as previously prescribed under former Article 27, § 384 of the Code,
  11. Murder in the first or second degree,
  12. Rape in the first or second degree,
  13. Robbery,
  14. Robbery with a dangerous weapon,
  15. Sexual offense in the first, second or third degree,
  16. An attempt to commit any of the crimes listed in items (1) through (15) of this subsection;  
or
  17. Assault with intent to commit any of the crimes listed in items (1) through (15) of this subsection or a crime punishable by imprisonment for more than 1 year.
- I. Dealer - Any person who is engaged in the business of: selling, renting or transferring firearms at wholesale or retail; or repairing firearms.
1. Sole proprietor - is an unincorporated business with one owner who pays personal income tax on profits from the business.
  2. LLC - The limited liability company is a hybrid legal entity that has both the characteristics of a corporation and of a partnership. An LLC provides its owners with corporate-like protection against personal liability.
- J. Dealer Sale – The sale, rental or transfer of a regulated firearm by a business licensed as a Maryland Regulated Firearms Dealer.
- K. Designated law enforcement agency - A law enforcement agency that the Secretary designates
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## **Handgun Qualification License Duties and Responsibilities**

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to process applications to purchase regulated firearms for secondary sales.

**L. Disqualifying crime means:**

1. A crime of violence,
2. A violation classified as a felony in the State; or
3. A violation classified as a misdemeanor in the State that carries a statutory penalty of more than two (2) years,
4. A case in which a person received probation before judgment for a crime of violence, and
5. A case in which a person received probation before judgment in a domestically related crime as defined in SS6-233 of the Criminal Procedure Article.
  - a. "Convicted of a disqualifying crime" does not include a case in which a person receives probation before judgment:
    - (I) for assault in the second degree; or
    - (II) was expunged under title 10, subtitle 1 of the criminal procedure article.

**M. Disapproved – The issuance of a Handgun Qualification License shall be denied for cause if the:**

1. Application contains false information or statements made by the applicant,
2. Application has not been completed as prescribed by the Secretary, i.e.
  - a. Lacking required training or lacking exemptions as are outlined under Public Safety Title 5 (117.1)
  - b. Lacking Live Scan entry upload into the Index
3. Secretary receives written notification from the applicant's licensed attending physician stating the applicant is suffering from a mental disorder or disorders and is a danger to himself or herself or to others,
4. Applicant has ever been convicted of:
  - a. A crime of violence,
  - b. Any violation classified as a felony in this State,
  - c. Any violation classified as a misdemeanor in this State that carries a statutory penalty of more than two (2) years, or

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### **Handgun Qualification License Duties and Responsibilities**

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- d. Any violation classified as a common law offense when the person received a term of imprisonment of more than two (2) years,
  - e. Applicant is a fugitive from justice,
  - f. Applicant is addicted to or a habitual user of any controlled dangerous substance,
  - g. Applicant is a habitual drunkard,
  - h. Applicant is less than 21 years old,
  - i. Applicant has spent more than 30 consecutive days in a mental institution for treatment of a mental disorder or disorders; disapproval of the application may be waived, however, if there is attached to the application a physician's certification issued within 30 days of the date of the application that certifies that the applicant is capable of possessing a regulated firearm without undue danger to the applicant or others,
  - j. Applicant is a respondent against whom a current non ex-parte civil protection order has been issued under Family Law Article, §4-506, Annotated Code of Maryland, or
  - k. Applicant is younger than 30 years old at the time of application and has been adjudicated delinquent by a juvenile court for:
    - i. A crime of violence,
    - ii. Any violation classified as a felony in this State, or
    - iii. Any violation classified as a misdemeanor in this State that carries a statutory penalty of more than two (2) years.
- N. Felony - A serious crime, usually punishable by a state or federal prison term of more than one year or, in some cases, by death.
- O. Firearm – Any weapon (including a starter gun) which will, or is designed to, or may readily be converted to, expel a projectile by the action of an explosive, or the frame or receiver of any such weapon.
- P. Fugitive from justice - A person who has fled to avoid prosecution or giving testimony in a criminal proceeding.
- Q. Gift – The purchase of a regulated firearm by the applicant for a spouse, parent, grandparent, grandchild, brother, sister, son or daughter who is a resident of this State.
- R. Habitual Drunkard – A person who has been found guilty of any three crimes under § 21-902(a), (b), or (c), of the Transportation Article, one of which occurred in the past year.
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## Handgun Qualification License Duties and Responsibilities

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- S. Habitual User - A person who has been found guilty of two controlled dangerous substance crimes, one of which occurred in the past five (5) years.
- T. Handgun – A handgun means any firearm with a barrel less than 16 inches in length including signal, starter and blank pistols.
- U. Handgun Qualification License- A license issued by the Secretary that authorizes a person to purchase, rent, or receive a handgun.
- V. Handgun Qualification License Applicant - A person who completes an HQL application.
- W. Handgun Qualification License Application- An application to receive a Handgun Qualification License.
- X. Handgun Qualification License Unit – A Unit of the Maryland State Police Support Services Bureau, Licensing Division. Handgun Qualification License Unit processes the Handgun Qualification License, the New Resident application, and the Qualified Handgun Instructors Certificate and License.
- Y. Hit – Any type of computer entry, with the exception of a Maryland Motor Vehicle Administration report, found while conducting a background investigation.
- Z. Incompetent to Stand Trial – A finding that a person is not able to understand the nature or object of a judicial proceeding or able to assist in one's defense.
- AA. Manufacturer – Any person who possesses a federal license to engage in the business of manufacturing firearms or ammunition for sale or distribution. The term shall include any person who engages in such business on a part-time basis.
- AB. Mental Disorder - A behavioral or emotional illness that results from a psychiatric or neurological disorder and includes a mental illness that substantially impairs the mental or emotional functioning of a person as to make care or treatment necessary or advisable for the welfare of the person or for the safety of the person or property of another. Mental Disorder does not include mental-retardation.
- AC. Minor/Juvenile – A minor/juvenile means any person under the age of 18 years.
- AD. Misdemeanor - A crime, less serious than a felony, punishable by no more than one year in a county or local jail and/or a fine.
- AE. Nolle Contendre - A plea entered by the defendant in response to being charged with a crime that neither admits nor denies that a crime was committed, but agrees to a punishment (usually a fine or jail time) as if guilty. In Maryland, a plea of Nolle Contendre is not a prohibitor but must be determined by which state accepted the plea.
- AF. Nolle Prosequi - Latin for "we shall no longer prosecute" is entered at trial and captured on the record by a prosecutor in a criminal case stating that the matter will no longer be pursued.
- AG. Not Criminally Responsible – If at the time of criminal conduct the defendant, because of a mental disorder or mental retardation, lacks substantial capacity to: appreciate the criminality of that

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**Handgun Qualification License Duties and Responsibilities**

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conduct; or conform that conduct to the requirements of law.

- AH. Office of Administrative Hearings (OAH) -The Office of Administrative Hearings (OAH) was created in 1990 to centralize and professionalize the administrative hearing process between citizens and businesses dissatisfied with an action of the State government that now allows the aggrieved to have their cases heard by Administrative Law Judges, who are independent of the agency whose action is being contested.
- AI. Open Disposition – An arrest that is not closed by a disposition, the disposition cannot be immediately determined or a disposition cannot be located.
- AJ. Placed on Further Review – The status of an application where a “HIT” has been found by civilian personnel during a computerized background check and the application has been forwarded to sworn personnel for further investigation. Reasons for further review are as follows:
1. Any type of a criminal record and/or criminal charge regardless of disposition or lack of disposition,
  2. Applicant is awaiting trial for any type of criminal proceeding,
  3. Warrant, fugitive, and/or applicant is under indictment,
  4. Applicant is addicted to or an unlawful/habitual user of controlled dangerous substances,
  5. Any alcohol related offenses, automobile manslaughters or homicides, suspensions or revoked driver's licenses that are listed in MVA,
  6. Applicant has been adjudicated as a mental defective, suffers from a mental disorder, and/or has been committed to a mental institution,
  7. Applicant is less than 21 years of age,
  8. Applicant is a respondent of a current non ex-parte or final civil protective order,
  9. Applicant is a respondent of a current interim or temporary ex-parte order,
  10. Applicant has been the subject of a petition for an emergency evaluation,
  11. Applicant is an illegal alien,
  12. A MAFSS check reveals that the applicant was Placed On Review, Placed On Hold, and/or Disapproved in the past,
  13. Dishonorable discharge from the armed forces,
  14. Applicant, having been a citizen of the United States, has renounced his/her citizenship,
  15. Miles NCIC response indicates that “the subject record will be automated as a result of your request and will be made available via the Interstate Identification Index...,”

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## Handgun Qualification License Duties and Responsibilities

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16. Firearm is reported as stolen/wanted.
- AK. Probation Before Judgment (PBJ) - Provides a means for a first offender to avoid having a conviction entered against him or her. The court, after a plea of guilty or Nolle Contendre, defers judgment of a conviction and places the offender on probation for a period of time, and if the offender complies with the terms and conditions at the end of the period of probation, no conviction will be entered on the record.
- AL. Protective Order - **Interim** - A civil order of protection issued by the District Court Commissioner when the District Court is closed that is in effect until the Temporary Protection Order hearing or the end of the second business day on which the Office of the Clerk of the District Court is open.
- AM. Protective Order - **Temporary** - A civil order of protection issued by the Circuit or District Court judge that is in effect for no more than seven (7) days after the service of the order or may be extended by the court for a period not to exceed 30 days.
- AN. Protective Order - **Final** - A civil order of protection issued by the Circuit or District Court judge that is in effect for up to 12 months after the service of the order or may be extended by the court for a period not to exceed six (6) months.
- AO. Qualified Handgun Instructor- means a certified firearms instructor who:
- (1) is recognized by the Maryland Police and Correctional Training commissions,
  - (2) has a qualified handgun instructor license issued by the Secretary; or
  - (3) has a certification issued by a nationally recognized firearms organization.
- AP. ~~Quality Assurance Control Reviews: Secondary reviews of HQL Applications and Affidavits to Purchase a Regulated Firearm~~ which were received by the Licensing Division Handgun Qualification License Unit ~~Firearms Registration Section~~. The reviews consist of repeating the investigation (except for the NICS check) conducted by HQL personnel ~~the Office Service Clerks~~ and reviewing the data contained in the MAFSS record to ensure accuracy of data entry and dispositions.
- AP. Rent - The temporary transfer for consideration of a regulated firearm that is taken from the property of the owner of the regulated firearm.
- AQ. Regulated Firearm - A regulated firearm means: Any handgun as defined in Public Safety Title 5-101(n) or any assault weapon as defined in Public Safety Title 5-101(r) or their copies, regardless of which company produced and manufactured that assault weapon.
- ~~AR. Regulated Firearms Dealer (RFD) - Any person who possesses a valid Maryland regulated firearms dealer's license issued by the Secretary of the Maryland Department of State Police.~~
- AS. Sale by Regulated Firearms Dealer - No regulated firearms dealer shall sell, rent or transfer any regulated firearm until after seven days following the time a firearm application is executed by the prospective purchaser or transferee, in triplicate, and the original copy is forwarded by the prospective seller or transferor to the Secretary.
- AT. Secondary Sale - A sale of a regulated firearm in which neither party to the sale is a licensee; is licensed by the federal government as a firearms dealer; devotes time, attention and labor to dealing in firearms as a regular course of trade or business with the principal objective of earning a profit through the repeated purchase and resale of firearms; or repairs firearms as a regular course of trade or business.



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## **Handgun Qualification License Duties and Responsibilities**

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- AU. Secretary-The Secretary of the Maryland Department of State Police or the Secretary's designee.
- AV. Statutory Law-Written law (as opposed to oral or customary law) set down by a legislature or other governing authority such as the executive branch of government in response to a perceived need to clarify the functioning of government, improve civil order or to codify existing law.
- AW. STET- An order staying all proceedings in an action.
- AX. Straw Purchase -A sale of a regulated firearm in which a person uses another, known as the straw purchaser, to: complete the application to purchase a regulated firearm; take initial possession of the regulated firearm; and subsequently transfer the regulated firearm to the person.
- AY. Transfer- The movement of a firearm from one point, (such as a Regulated Firearms Dealer to another or such as an individual or between individuals).
- AZ. Voluntary Registration-The registration of a regulated firearm that is not required by Maryland State statute to be registered in the Maryland Automated Firearms Services System (i.e., Firearm(s) that were legally purchased in another state by an individual who resided in that state who has now established residency in the State of Maryland and moved their estate belongings into the State of Maryland; or an individual who possesses regulated firearms or other types of firearms not previously registered in the State of Maryland who desires to register it).

### **.07 Responsibilities**

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- A. The sworn members of the Handgun Qualification Unit will conduct background checks on all HQLs that are requiring a secondary check. Should the workload deem it necessary, the sworn members of the Handgun Qualification Unit will conduct start to finish background checks on HQLs. In addition the sworn members of the unit will be responsible for any additional administrative duties that are assigned to them.
- B. The civilian employees are responsible for completing initial background checks on applications that are received. They will also be responsible for assisting the customers of the Unit who make contact by phone or by e-mail. In addition the civilians will be assigned supporting roles to other sections as is deemed necessary, due to workloads, and mandates.

### **.08 Procedures**

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#### **See Desktop Procedures**

- A. Standard Handgun Qualification License
  - B. Training Exempt Handgun Qualification License
  - C. Permit Exempt Handgun Qualification License
  - D. Qualified Handgun Instructor
  - E. New Resident
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## **Handgun Qualification License Duties and Responsibilities**

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- F. Printing HQL Duplicate Licenses
- G. Printing HQL Licenses in Batches
- H. Billing Audit of CyberSource
- I. HQL Application Review and Quality Assurance Process
- J. HQL Disapproval Process
- K. HQL Revocation Process
- L. Compatibility Fix for Internet Explorer
- M. Instructions for Windows 10

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## **Declaration Exhibit 3**

MSP Licensing Division HQL Section  
Sworn and Civilian Personnel Compensation 2017

Sworn Name	Salary	FICA (1.45%)	Unemployment (0.28%)	Retirement (83.73%)	Health Insurance (\$10,547)	Retiree Health (\$6,117)	Clothing Allowance (\$1,500)	Total	OT Rate	OT Hours	Total OT Pay	Total
Sgt. Jeremy Burns	\$ 85,208.00	\$ 1,235.52	\$ 238.58	\$ 71,344.66	\$ 10,547.00	\$ 6,117.00	\$ 1,500.00	\$ 176,190.76	\$ 61.21	248	\$ 15,180.74	\$ 191,371.49
Cpl. Gerald Atkins	\$ 72,143.00	\$ 1,046.07	\$ 202.00	\$ 60,405.33	\$ 10,547.00	\$ 6,117.00	\$ 1,500.00	\$ 151,860.41	\$ 51.83	88	\$ 4,580.76	\$ 156,521.17
Senior Trooper Ricardo Amoroso	\$ 72,146.00	\$ 1,046.12	\$ 202.01	\$ 60,407.85	\$ 10,547.00	\$ 6,117.00	\$ 1,500.00	\$ 151,965.97	\$ 51.83	137	\$ 7,100.58	\$ 159,066.55
Cpl. Michael Smith	\$ 73,947.00	\$ 1,072.23	\$ 207.05	\$ 61,915.82	\$ 10,547.00	\$ 6,117.00	\$ 1,500.00	\$ 103,589.17	\$ 53.12	36	\$ 1,912.42	\$ 105,501.60
<b>SUB-TOTAL</b>	\$ 303,444.00	\$ 4,399.94	\$ 849.64	\$ 254,073.66	\$ 42,188.00	\$ 24,468.00	\$ 6,000.00	\$ 583,706.31			\$ 28,754.50	\$ 612,460.81
<b>Civilian Name</b>	<b>Salary</b>	<b>FICA (7.28%)</b>	<b>Unemployment (0.28%)</b>	<b>Retirement (19.74%)</b>	<b>Health Insurance (\$10,547)</b>	<b>Retiree Health (\$6,117)</b>	<b>Clothing Allowance (\$0)</b>	<b>Total</b>				
Diane Armstrong	\$ 39,341.00	\$ 2,864.02	\$ 110.15	\$ 7,954.83	\$ 10,547.00	\$ 6,117.00	\$ -	\$ 66,745.09	\$ 28.26	57	\$ 1,610.95	\$ 68,356.04
Monique Mitchell	\$ 40,298.00	\$ 2,893.69	\$ 112.83	\$ 7,954.83	\$ 10,547.00	\$ 6,117.00	\$ -	\$ 67,963.35	\$ 28.95		\$ -	\$ 67,963.35
Tianda Greene	\$ 34,536.00	\$ 2,514.22	\$ 96.70	\$ 6,817.41	\$ 10,547.00	\$ 6,117.00	\$ -	\$ 60,628.33	\$ 24.81	100.5	\$ 2,493.44	\$ 63,121.77
Mona Smith	\$ 39,162.00	\$ 2,850.99	\$ 109.65	\$ 7,730.58	\$ 10,547.00	\$ 6,117.00	\$ -	\$ 66,517.23	\$ 28.13	47	\$ 1,322.28	\$ 67,839.51
Samuel Michaelson	\$ 34,536.00	\$ 2,514.22	\$ 96.70	\$ 6,817.41	\$ 10,547.00	\$ 6,117.00	\$ -	\$ 60,628.33	\$ 24.81		\$ -	\$ 60,628.33
Diane Duckett	\$ 27,048.00	\$ 1,969.09	\$ 75.73	\$ 5,339.28	\$ 10,547.00	\$ 6,117.00	\$ -	\$ 51,096.10	\$ 19.43		\$ -	\$ 51,096.10
Dellene Lizama	\$ 27,048.00	\$ 1,969.09	\$ 75.73	\$ 5,339.28	\$ 10,547.00	\$ 6,117.00	\$ -	\$ 51,096.10	\$ 19.43		\$ -	\$ 51,096.10
Brett Stevens	\$ 77,699.00	\$ 5,656.49	\$ 217.56	\$ 15,337.78	\$ 10,547.00	\$ 6,117.00	\$ -	\$ 115,574.83	\$ 55.82		\$ -	\$ 115,574.83
<b>SUB-TOTAL</b>	\$ 319,668.00	\$ 23,271.83	\$ 895.07	\$ 63,102.46	\$ 84,376.00	\$ 48,936.00	\$ -	\$ 540,249.36			\$ 5,426.67	\$ 545,676.03
<b>TOTALS</b>	\$ 623,112.00	\$ 27,671.77	\$ 1,744.71	\$ 317,176.12	\$ 126,564.00	\$ 73,404.00	\$ 6,000.00	\$ 1,123,955.67			\$ 34,181.16	\$ 1,158,136.84

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## **Declaration Exhibit 4**

TITLE: Identification Card Printer

qty rate 2014 COST 2015 COST 2016 COST 2017 COST 2018 COST

### Identification Card Printer & Supplies

Identification Card Printer - Fargo HDP5000 (dual sided printing and dual sided inline lamination)	Each	8,495
Serviceable Life	50,000	

	Unit Cost	Count	Cost per 1000
YMCKK Fargo Printer Ribbon - HDP5000	207	500	414
Fargo Clear Polyguard Over laminate, 1.0 mil	63	250	252
Fargo HDP5000 Printer Cleaning Kit	36	500	72
Blank Identification Cards - hologram	540	500	1,080
Fargo HDP Film - HDP5000 Printers	112	1,500	75
		Supply cost per 1000	1,893

Supply cost per card 1.89  
Printer cost per card 0.17  
Estimated cost per ID Card 2.06

Anticipated number of cards created by ID Card Printer	Life	Sale of Regulated Firearm Projected Data
	50,000	71,914 83,781 89,715

Identification Printer (w/ replacement cycle)	Per 50,000	8,495	11,210	12,218	13,226	14,234	15,243
Printer Ribbon	Per 1,000	414	27,316	29,772	32,229	34,686	37,142
Card Laminate	Per 1,000	252	16,627	18,122	19,618	21,113	22,608
Film	Per 1,000	75	4,927	5,370	5,813	6,256	6,699
Blank Cards	Per 1,000	1,080	71,259	77,667	84,075	90,484	96,892
Printer Cleaning Kit	Per 1,000	63	4,157	4,531	4,904	5,278	5,652
TOTAL			135,495	147,680	159,865	172,051	184,236

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## **Declaration Exhibit 5**

# IMPORTANT PRIORITY MESSAGE

## IMMEDIATE ACTION REQUIRED

Licensing Division  
1111 Reisterstown Road  
Pikesville, MD 21208  
March 12, 2012

**TO: APPLICANTS FOR SERVICES PROVIDED BY THE MARYLAND STATE POLICE LICENSING DIVISION**

**RE: NEW FINGERPRINT PROCEDURES EFFECTIVE MARCH 19, 2012**

**EFFECTIVE March 19, 2012**, The Maryland Department of State Police will no longer accept federal and/or state fingerprint cards from Applicants for Permits, Licenses, Commissions or any other type of certification or identification related to Licensing Division activities and/or responsibilities. In addition, the Federal Bureau of Investigation (FBI) has reduced the amount they charge for fingerprint and name based criminal history records checks. The fee change is effective March 19, 2012.

The Maryland Department of Public Safety and Correctional Services, the entity that processes both State and Federal fingerprint cards (inked and rolled type), has notified the Maryland State Police that they will only process electronic submissions of fingerprints beginning on April 15, 2012. The Federal Bureau of Investigation prompted this action as they, at the direction of their Director, will no longer accept fingerprint cards for comparison purposes. Due to fee changes and operational preparations for the April 15<sup>th</sup> move away from fingerprint cards, the Department of State Police will begin the transition on March 19, 2012.

**EFFECTIVE MARCH 19, 2012, ALL FINGERPRINTS MUST BE SUBMITTED ELECTRONICALLY VIA AN APPROVED SITE OR VENDOR. FOR FURTHER INFORMATION PLEASE USE THE BELOW LINK TO REVIEW THE NEW POLICIES AND PROCEDURES PRESENTED BY THE MARYLAND DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONAL SERVICES AS WELL AS THE LOCATION OF AVAILABLE SITES FOR ELECTRONIC FINGERPRINTING:**

<http://www.dpscs.state.md.us/publicservs/fingerprint.shtml>

APPLICATIONS MUST BE POSTMARKED AS SENT TO THE LICENSING DIVISION WITHIN 72 HOURS OF FINGERPRINTS BEING ELECTRONICALLY SUBMITTED THROUGH AN ELECTRONIC FINGERPRINT PROCESSING CENTER. IF YOUR APPLICATION IS NOT SUBMITTED WITHIN 72 HOURS IT **MAY BE RETURNED** TO THE APPLICANT. This is important as the value of fingerprints submitted decreases over time and results become unusable after 30 calendar days.

**IMPORTANT NOTE:** ATTACH THE RECEIPT PROVIDED BY THE FINGERPRINT PROCESSING CENTER TO THE FRONT LEFT UPPER CORNER OF THE FIRST PAGE OF THE APPLICATION WHEN SUBMITTING. THE TRACKING NUMBER PROVIDED ALLOWS PERSONNEL TO LOCATE AND ACCESS FINGERPRINT COMPARISON RESULTS AMONG ALL THAT ARE RECEIVED BY THE DIVISION. Applications received without the receipt may not be processed in a timely manner or at all in some cases. Authorization codes for the various requests are available at the Electronic Fingerprint Processing Centers.

**IF YOUR APPLICATION IS RECEIVED BY THE LICENSING DIVISION, AND WE DO NOT RECEIVE NOTIFICATION THAT THE FINGERPRINTS HAVE BEEN SUBMITTED WITHIN FIVE BUSINESS DAYS, YOUR APPLICATION WILL BE RETURNED**

RE: **NEW FINGERPRINT PROCEDURES EFFECTIVE MARCH 19, 2012**

March 12, 2012

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**FEES TO THE LICENSING DIVISION ARE NON REFUNDABLE.** FEES PAID TO THE ELECTRONIC FINGERPRINT PROCESSING CENTER DO NOT INCLUDE THOSE FEES OWED TO THE LICENSING DIVISION FOR THE PROCESSING OF THE ACTUAL APPLICATION. THE FINGERPRINT PROCESSING CENTERS ARE UNDER PRIVATE OWNERSHIP AND THEIR FEES COULD VARY. THE DEPARTMENT MARYLAND STATE POLICE IS NOT AFFILIATED WITH THE ELECTRONIC FINGERPRINT PROCESSING CENTERS AND DO NOT REGULATE NOR RECEIVE OR BENEFIT FROM ANY FEE THAT THEY MAY CHARGE. PLEASE ENSURE YOU HAVE CALCULATED YOUR FEES CORRECTLY. CHECKS OR MONEY ORDERS SENT TO THE MARYLAND STATE POLICE SHOULD NOT INCLUDE FEES FOR FINGERPRINTS ELECTRONICALLY CAPTURED AFTER MARCH 19, 2012, UNLESS PAPER FINGERPRINT CARDS HAVE BEEN SUBMITTED BY OUT-OF-STATE APPLICANTS.

One exception to the above procedure exists. If you are an applicant who maintains a primary residence outside of Maryland AND this address is supported by an out-of-state driver's license you may continue to submit State and Federal fingerprint cards. FBI-Approved Channelers may be used by out of state applicants required to submit FBI fingerprint cards as in the case of renewals. Approved Channelers may be found on the FBI web site. All other applicants who submit fingerprint cards obtained after March 19, 2012, will have their application rejected.

### **FINGERPRINT FEE CODES**

Below are the codes to be used when having your fingerprints taken for submission to the Maryland Department of Public Safety and Correctional Services in response to a request for services from the Maryland State Police Licensing Division.

- |  |            |
|--|------------|
| 1. Handgun Permit .....                                    | 9400082484 |
| 2. Security Guard (Individual) .....                       | 9300000802 |
| 3. Private Detective (Individual) .....                    | 9400082495 |
| 4. Security Agency/Private Detective Agency (Company)..... | 9400082495 |
| 5. Special Police/Railroad Police Commissions .....        | 9400082506 |
| 6. Security Systems Agency/Security Systems Technicians... | 9700004860 |
| 7. Regulated Firearms Dealer .....                         | 9400082473 |
| 8. Class III .....   | 9400082473 |

## **IMPORTANT PRIORITY MESSAGE**

## **IMMEDIATE ACTION REQUIRED**



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## **Declaration Exhibit 6**

FIRST_NAME	LAST_NAME	SID	DATE_OF_BIRTH	LICENSE_NO	NOTES
				HQL-2015-009590	could not find any criminal records
				HQL-2016-003796	DNR charge - fail to display current valid - Guilty
				HQL-2015-005539	Assault 1st; Assault 2nd; Dangerous Weapon-Int/Injure - Nolle Pros on all charges
				HQL-2015-001752	Assault 1st; Assault 2nd; Reckless Endangerment; Firearm Use/Fel-viol crime
					Disorderly conduct & CDS;Possession-Marihuana-Guilty not a prohibitor; Threat/St Official/To Injure-Stet; CDS;Possession-Marihuana-NP
				HQL-2015-013270	Marihuana-NP
				HQL-2015-005552	child abuse 2nd degree PBJ-completed; Assault 2nd Nolle Pros
				HQL-2015-005470	disorderly conduct Nolle Pros; Fail Obey Renbid/Lawfl Nolle Pros
				HQL-2015-006078	assault 2nd Stet; Theft less 1,000 Stet
				HQL-2014-006536	Assault 1st-NP; Assault 2nd-GUILTY; Reckless Endangerment-NP; Firearm Use-Fel:Viol Crime-NP - HQL REVOKED
				HQL-2015-008706	Burglary 3rd; Trespass:Private Property; Harass; A Course of Conduct; MDOP \$1,000
				HQL-2015-002229	assault 2nd Nolle Pros; assault 2nd PBJ unsupervised
				HQL-2017-002975	Assault 1st; Assault 2nd; Firearm Use/Fel-Viol Crime
				HQL-2014-011049	Assault 1st-PBJ; Handgun in Vehicle-NP; Firearm Use/Fel-Viol Crime-NP; Theft less \$1,000-NP; Armed Robbery-NP; Robbery-NP; Reckless Endangerment-NP - HQL REVOKED
				HQL-2016-008641	Assault 1st-NP; Assault 2nd-JA; HGV Use/Fel-Viol Crime-NP; Handgun on Person-JA; Reckless Endangerment-JA; Harrass-JA
				HQL-2014-004621	Assault 1st; Assault 2nd; Firearm Use/Fel-Viol Crime - All dispositions dismissed
				HQL-2015-015074	Theft less than \$100 - NP
				HQL-2015-017582	Assault 1st -NP; Assault 2nd; Theft 1,000-10,000 -Judgment of Acquital
				HQL-2014-005022	Rape Second Degree - GUILTY - HQL REVOKED
				HQL-2016-004220	Assault 1st-NP; Assault 2nd-GUILTY; Reckless Endangerment-NP - HQL REVOKED
				HQL-2014-006176	Sex Abuse Minor; Sex Offense 3rd; Sex Offense 4th-Vag Int 14/15; Child Abuse: 2nd-Cust
				HQL-2017-019753	no open criminal records found
				HQL-2015-006213	Assault 1st-Dismissed; Assault 2nd-PBJ Unsupervised; CDS Possess Not Marijuana-Dismissed
				HQL-2017-009980	Assault 1st; Firearm Use/Fel-Viol Crime; Assault 2nd; Reckless Endangerment - All Charges NP
				HQL-2017-017489	no open criminal records found
				HQL-2017-015464	no open criminal records found
				HQL-2014-009677	domestic violence order denied
				HQL-2016-007879	Attempted Robbery; Battery; MDOP +300; Handgun - all NP; Battery Stet
				HQL-2016-016601	Assault 2nd; Assault 1st - Both charges NP
				HQL-2017-003584	no open criminal records found
				HQL-2017-013474	no open criminal records found
				HQL-2014-007810	Assault 1st; Assault 2nd; Handgun in Vehicle; Handgun on Person; Reckless Endangerment
				HQL-2014-014551	Murder 2nd; Manslaughter; Firearm Use/Felony/Violent Crime - All Charges NG
				HQL-2015-007845	Assault 1st; Assault 2nd
				HQL-2017-001022	Assault 2nd-Stet; Reckless Endangerment-Stet
				HQL-2016-021632	could not find any criminal records
				HQL-2014-001657	Assault 2nd - GUILTY - HQL REVOKED
				HQL-2017-023049	no open criminal records found

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HQL-2017-018030	no open criminal records found
HQL-2017-011368	no open criminal records found
HQL-2015-002776	Assault 2nd - NP
HQL-2013-002515	GUILTY - Assault 1st Degree / PBJ on 5/11/15 - HQL REVOKED
HQL-2015-013608	Assault 1st; Assault 2nd; Assault 2nd - first 2 dismissed, third stet
HQL-2017-013510	no open criminal records found
	Assault 1st Not Guilty; Assault 2nd Not Guilty; Reckless Endang Not Guilty; Misconduct in Ofc Not Guilty
HQL-2014-012801	Guilty
HQL-2016-010885	CDS:Poss-Marijuana - Stet
HQL-2014-004986	GUILTY - Assault Second Degree
HQL-2016-001372	Assault 1st-NP; Assault 2nd-No disposition
HQL-2017-002918	no active criminal cases found
HQL-2017-000116	no criminal records found
HQL-2017-011241	Assault 1st; Assault 2nd; Handgon on Person; Handgun in Vehicle; Firearm Use/Fel-Viol Crime theft less 1,000 PBJ unsupervised-not a prohibitor per Durkee (max sentence 18 mos); assault 1st Nolle Pros; assault 2nd Stet
HQL-2014-006237	no open criminal records found
HQL-2017-020700	Motor Veh/Unlawful taking; U/U Livestock MV Etc; Theft: \$500 Plus - All charges NP
HQL-2015-012432	Assault 1st; Assault 2nd; Firearm Use/Fel-Viol Crime - All dispositions NP
HQL-2014-013059	deadly weapon not guilty
HQL-2015-005547	
HQL-2015-009424	Assault 1st-NP; Assault 2nd-Stet; Dangerous Weapon-Conceal-Stet; Dangerous Weapon-Int/Injure-PBJ
HQL-2014-014203	domestic violence order denied
HQL-2014-008295	assault 2nd abated by death
HQL-2013-003295	Amed Robbery/Assault 1st (15 total charges) all charges were NP except GUILTY on Con-Armed Robberty - HQL Revoked
HQL-2016-019890	no criminal records found
HQL-2017-018702	no criminal records found
HQL-2016-026395	Assault 1st - NP; Assault 2nd - NP
HQL-2014-005241	cannot find any records
HQL-2016-026379	Assault 1st; Assault 2nd - all charges dismissed
HQL-2015-010952	Assault 1st; Assault 2nd; Firearm Used/Fel-Viol Crime; Handgun on Person - All Cases NP
HQL-2017-021229	no open criminal records found
HQL-2017-020847	Theft: 1,000 to under 10,000; Theft less 1,000; Theft-Scheme 1K to under 10K; 2nd hand dealer trans w/minor; 2nd hand dealer daily report; 2nd hand dealer file w/police; 2nd hand dealer holding req; 2nd hand dealer label items
HQL-2014-009621	Theft < 1000-GUILTY; Theft 1000 to under 10000-NP; Theft Scheme 1000 to under 10000-NP; CDS: Poss Paraphernalia-NP; CDS: Possess-not marijuana-NP
HQL-2014-009270	Sex Abuse Minor; Sex Offense 2nd Degree; Sex Offense 3rd Degree; Sex Offense 4th Degree; Assault 2nd - Guilty - HQL REVOKED

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HQL-2016-004777	Assault 1st; Assault 2nd - NP on both cases. Addl charges with no dispositions - had reviewed by Sgt. Durkee and he said ok to let approval go as they lumped the charges into 3
HQL-2016-012127	GUILTY - sex abuse minor - HQL REVOKED
HQL-2017-020356	no open criminal records found
HQL-2013-001776	Assault 1st&2nd; Firearm Use/Fel-Viol Crime; Handgun on Person; MDOP + 1,000 - All charges NP
HQL-2013-000085	GUILTY - Assault 2nd Degree on 5/5/2015 - HQL REVOKED
HQL-2014-001484	Assault 1st - NP; Assault 2nd - GUILTY; Reckless Endanger-NP; Handgun Person-NP; Handgun Vehicle-NP; Firearm Use-NP - HQL REVOKED
HQL-2016-018864	Burglary 4th; MDOP - \$1,000 both dismissed; MDOP - \$1,000 - NG
HQL-2014-012708	cannot find any records
HQL-2015-016535	Assault 1st; Assault 2nd; Firearm Use-Fel-Viol Crime - All charges NP
HQL-2013-003148	Assault 1st-Dismissed; Assault 2nd-Stet
HQL02015-015082	Robbery-NP; Theft less \$1,000-NP; Assault 2nd-GUILTY - HQL REVOKED
HQL-2015-018365	Assault 1st; Handgun Use; Carry Handgun & Conspiracy Assault 1st - NP; Assault 2nd - PBJ / Assault 2nd; Handgun on Person - NP
HQL-2017-012078	CDS:Poss w/Int Maf/Distr/Disp - PBJ
HQL-2016-000872	no criminal case found - located a traffic case with disposition FTA
HQL-2015-000152	assault 2nd nolle pros
HQL-2015-015236	Assault 1st; Assault 2nd; Firearm Use all NP, Reckless Endangerment Judgment Stayed
HQL-2014-003072	Assault 2nd - PBJ; Firearm Use - NP; Reckless Endangerment - NP
HQL-2017-017520	no open criminal records found
HQL-2014-001146	Robbery, Assault 2nd, Theft less \$1,000 - all NP
HQL-2017-007792	CDS:Possession-Marihuana; CDS:Poss Paraphernalia - both cases Stet
HQL-2016-016677	Assault 1st-NP; Assault 2nd-NG; CDS Possession-Marihuana-NP
HQL-2016-005758	Assault 1st; Assault 2nd - All charges Stet
HQL-2014-000264	wrong SID number was listed on HQL application
HQL-2016-017340	no criminal case found - could only locate traffic cases
HQL-2014-006201	Harras:A course of conduct; Tel Misuse:Repeat Calls; Elec Mail Harrass - all charges: Stet
HQL-2016-021326	Burglary 3rd-NP; Burglary 4th-NP; Assault 2nd-PBJ/Supevised Probation - HQL REVOKED
HQL-2017-016643	no open criminal records found
HQL-2017-022881	no open criminal records found
HQL-2014-002502	Assault 1st; Assault 2nd; Mal Dest Prop/Valu \$1,000 - All dispositions NP
HQL-2017-014692	no open criminal records found
HQL-2016-025996	Assault 1st-NP; Assault 2nd-JA; Firearm Use/Fel-Viol Crime-JA; Reckless Endangerment-JA
HQL-2015-000364	Possess Alcohol in Public - NP
HQL-2016-014993	Firearm/Drug Traf Crime; CDS: Distr Etc w/Firearm; CDS: Possess-not marijuana; CDS: Poss w/int to Distr; Firearm Use/Fel-Viol Crime; CDS: Poss w/ Distr: Narc
HQL-2014-003354	Assault 1st Noell Pros; Assault 2nd Not Guilty; Reckless Endanger Not Guilty; Disturbing the Peace Noell Pros
HQL-2014-004225	Assault 1st; Assault 2nd - both cases dismissed/Assault 2nd - Stet
HQL-2017-009439	no open criminal records found

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HQL-2015-012658	Armed Robbery; Firearm Use/Fel-Viol Crime; Robbery; Theft 1000-10000; Assault 2nd; Handgun on Person; Dangerous Weapon-Conceal; Dangerous Weapon-Int/Injure; Assault 1st; Handgun in Vehicle - All Charges NP
HQL-2014-009542	Assault 1st Noell Pros; Con-Assault 1st Noell Pros; Assault 2nd & Con-Assault - Judgement of Acquittal
HQL-2016-004315	Assault 2nd; False Imprisonment; Mal Dest Prop/Valu-\$500 - all NP
HQL-2017-000578	Reckless Endangerment - GUILTY
HQL-2015-012185	Assault 1st-NP; Assault 2nd-NG
HQL-2017-003974	Assault 1st-NP; Assault 2nd; Reckless Endangerment
HQL-2015-001762	Sex Abuse Minor; Sex Offense 1st; Sex Offense 3rd
HQL-2015-003026	Att-Kidnap child under 16; Assault 2nd - All Charges NP
HQL-2017-008555	no open criminal records found
HQL-2015-009291	Sex Offense 2nd; Sex Offense 3rd; Child Abuse:Parent; Perverted Practice; Sodomy-General
HQL-2017-011409	no open criminal records found
HQL-2016-009161	Burglary 2nd-General; Burglary 4th-Tools; Theft: 1000 to under 10000; Mal Dest Prop/Valu-\$1000; CDS: Possess-Not Marijuana - All Charges NP
HQL-2016-007685	Assault 1st-NP; Assault 2nd-NP; Reckless Endangerment-NP; Handgun on Person-NP; Handgun in Vehicle-PBJ
HQL-2014-002612	GUILTY - Assault 2nd - HQL REVOKED
HQL-2017-023352	no open criminal records found
HQL-2017-020067	no open criminal records found
HQL-2017-016508	no open criminal records found
HQL-2017-007782	no open criminal records found
HQL-2014-005367	Assault 1st-NP; Assault 2nd-NP; Handgun in Vehicle-PBJ; Reckless Endangerment-NP
HQL-2014-008728	Armed Robbery-GUILTY; Firearm Use-Fel-Viol Crime-GUILTY; Impersonation UU/Uniform-GUILTY
HQL-2015-000293	Armed Robbery-NP; Robbery-NP; Assault 1st-NP; Assault 2nd; Theft Less \$1,000; Con-Armed Robbery; Con-Robbery; Firearm Use/Fel-Viol Crime
HQL-2016-009660	Assault 1st; Assault 2nd - All charges dismissed
HQL-2014-006260	poss control danger substance-NP; Poss w/intent use drug paraphnelia -NP; handgun on person-Stet; handgun in vehicle-Stet; poss firearm/ammo/minor-Stet
HQL-2015-000693	Manslaughter by Auto-GUILTY; Homicide MV Intox -NP - HQL REVOKED
HQL-2015-009435	Assault 1st; Assault 2nd; Firearm Use/Felony/Violent Crime
HQL-2016-017364	Assault 1st; Assault 2nd; Reckless Endangerment; Mal Dest Prop - \$1,000
HQL-2015-004562	Sex Abuse Mnr/Cont Course Cndct; Sex Abuse Minor:House/Fam; Rape 2nd; Assault 2nd; Sexual Solicitation of a Minor; Indecent Exposure; CDS:Poss-Marijuana 10GM+
HQL-2017-011099	no open criminal records found
HQL-2014-012912	Assault 1st; Assault 2nd; Reckless Endangerment; Handgun in Vehicle; Handgun on Person; Firearm Use/Fel-Viol Crime
HQL-2014-003801	Assault 1st/Assault 2nd both dismissed/Assault 2nd-Stet
HQL-2016-021836	Robbery with Deadly Weapon (DJS) - Sustained/Delinquent - Revocation Overturned expungement paperwork recd

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HQL-2016-022152	Assault 1st; Assault 2nd; Reckless Endangerment; Handgun on Person - All Charges NP
HQL-2016-021832	Malicious Destruction of Property
HQL-2015-011274	Assault 2nd; Reckless Endangerment; Handgun on Personal / all charges NP; CDS Possession Marijuana
HQL-2016-004316	Arrest 7/9/2016 - HQL REVOKED
HQL-2015-005166	Murder 1st-GUILTY; Assault 1st-NP; Use Hangun/Crime of Viol/Comm-GUILTY; Carry Hangun-NP;
HQL-2017-01694	Transport Handgun on Roadway-NP - HQL REVOKED
HQL-2015-018075	CDS Poss W/Int To Dist; CDS;Possess-Not Marijuana - all charges NP
HQL-2014-012558	no open criminal records found
HQL-2015-011860	all charges listed as NP
HQL-2014-012447	GUILTY - CDS Possessioin with Intent to Distribute Marijuana on 7/2/2015 - HQL REVOKED
HQL-2015-017440	Att 1st Degree Murder; Att 2nd Degree Murder; Assault 1st; Firearm Use-Fel/Viol Crime
HQL-2017-013450	Assault 1st; Assault 2nd - all charges NP
HQL-2015-001337	Mal Destruction property Value + \$300 / NP
HQL-2014-012654	no open criminal records found
HQL-2015-016216	Att 1st Degree Murder; Assault 1st; Assault 2nd; Firearm Use/Fel-Viol Crime; Armed Robbery
HQL-2014-013465	no criminal case found
HQL-2013-003518	Assault 1st Noell Pros
HQL-2014-007544	Robbery; Assault 2nd; Theft 1-10,000 Noell Pros
HQL-2015-012721	Assault 1st; Assault 2nd - All Charges NP
HQL-2015-003404	Assault 1st; Assault 2nd; Dangerous-Sec Degree - all charges NP
HQL-2015-014018	Assault 1st-dismissed; Assault 2nd-dismissed; Burglary 4th-NP; Theft \$1,000-10,000-NP;
HQL-2016-027329	Resist/Interfere w/Arrest-NP; Assault 2nd-NG/PBJ-Unsupervised
HQL-2017-004664	Assault 1st-NP; Firearm Use/Fel-Viol Crime-NP; Assault 2nd-NG; Dangerous Weapon-Int/Injure-NG
HQL-2016-016595	Burglary 2nd-General; Burglary 4th-Store; Burglary 4th-Theft; MDOP \$1000; Theft 1500 to under 25000
HQL-2015-004174	Assault 1st; Assault 2nd
HQL-2015-012721	Reckless Endangerment
HQL-2017-010106	Assault 1st; Assault 2nd; Dangerous Weapon-Int/Injure - NP on all cases
HQL-2014-014505	Burglary 1st-NP; Burglary 3rd-NP; Burglary 4th-Stet; Assault 2nd-NP
HQL-2016-023045	Assault 1st; Assault 2nd; Firearms-Access by Minors - all charges Dismissed
HQL-2014-013559	Assault 2nd; MDOP - \$1,000; Assault 1st - All Dismissed; Assault 2nd - PBJ
HQL-2017-015391	Assault 1st-NP; Assault 2nd-NP
HQL-2016-008031	no open criminal records found
HQL-2015-004958	all charges under applicant's name are Traffic charges
HQL-2015-006996	Handgun in Vehicle; Assault 1st; False Imprisonment; Handgun on Person
HQL-2013-003808	GUILTY - Assault 2nd & Mal Destruction 1000+ - HQL REVOKED (no disposition on Burglary 3rd)
HQL-2015-001495	Assault 1st; Assault 2nd - NP on both cases
	Attempt 1st Degree Murder; Consp 1st Degree Murder; Assault 1st; Assault 2nd; Firearm Use/Fel-Viol Crime

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HQL-2014-011418	Assault 1st; Reckless Endangerment - All Charges NP
HQL-2015-016434	Assault 2nd - Stet
HQL-2013-002197	GUILTY-Assault 1st Degree; GUILTY Handgun on Person on 11/24/2014 - HQL REVOKED
HQL-2015-013707	no open criminal records found
HQL-2016-019344	Assault 1st; Assault 2nd; Dangerous Weapon-Int/Injure
HQL-2016-007391	Assault 2nd; Assault 1st; Assault 2nd; Theft \$100-1500; Mal Dest Prop/Value -\$1000
HQL-2014-009588	Assault 1st; Assault 2nd; Reckless endangerment; Dangerous Weapon-Int/Injure
HQL-2017-014646	no open criminal records found
HQL-2017-020597	no criminal cases found
HQL-2017-019977	no open criminal records found
HQL-2017-017954	no open criminal records found
HQL-2014-003633	Assault 1st Not Guilty; Assault 2nd Dropped/No info
HQL-2013-001583	GUILTY - CDS:Production Equipment - HQL REVOKED
HQL-2015-005868	Assault 1st; Firearm Use/Fel-Viol Crime - All charges Stet
HQL-2014-008202	handgun on person-NP ; illegal poss ammo-Guilty - HQL REVOKED
HQL-2017-002344	Assault 1st; Assault 2nd
HQL-2016-007954	Burglary 1st; Burglary 3rd; Burglary 4th; MDOP - \$1,000; Theft less than \$1,000
HQL-2013-002545	Handgun on Person - PBJ / all other charges NP
HQL-2014-003644	Robbery - NP; Assault 2nd - Guilty; Theft less \$100 - Guilty - HQL REVOKED
HQL-2016-014976	Burglary 3rd; Assault 1st; Assault 2nd; Reckless Endangerment; False Imprisonment; Burglary 4th - All NP
HQL-2016-003994	Murder 1st; Murder 2nd; Assault 1st; Assault 2nd; Handgun on Person
HQL-2016-024874	no criminal cases found
HQL-2013-001754	Attempted 1st Degree Murder + 16 other charges - All charges NP or NG
HQL-2015-012490	Assault 1st; Assault 2nd; Reckless Endangerment; Disorderly Conduct; Dangerous Weapon-Conceal; Dangerous Weapon-Int/Injure; Handgun on Person; Handgun in Vehicle-Guilty - HQL REVOKED
HQL-2014-008335	Assault 1st; Reckless Endangerment; Dangerous Weapon-Int/Injure; Mace/Chem Device-Int/Injure- All Charges NP
HQL-2015-004449	Protective Order expired
HQL-2016-008046	Armed Robbery-NP; Con-Armed Robbery-NP; Robbery-NP; Assault 1st-NP; Assault 2nd; Reckless Endangerment; Theft less \$100; Firearm Use/Fel-Viol Crime
HQL-2015-012195	could not find any criminal records
HQL-2017-021119	no open criminal records found
HQL-2016-006650	no criminal case found
HQL-2016-003205	Assault-First; Assault-Sec both dismissed. Theft \$300 Plus-PBJ Supervised; False Stmt to Ofcr-Stet; Man Serial #:Remov/Oblit-Guilty (misdemeanor max 18 mos)
HQL-2014-006116	Attempted 1st Degree Murder +7 other charges - all charges NOT CRIMINALLY RESPONSIBLE - HQL REVOKED
HQL-2017-009474	Assault 1st; Assault 2nd; Theft less \$100
HQL-2016-001454	Assault 1st-NP; Assault 2nd-NP; MDOP - \$1,000-Guilty
HQL-2016-013685	Handgun in vehicle; assault weapon pss/sell - both NP
HQL-2017-021845	no open criminal records found

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HQL-2015-000689	Assault 1st; Assault 2nd & Firearm Use/Fel-Viol Crime - All charges NP
HQL-2014-015241	Attempted 1st Degree Murder-NG; Attempted 2nd Degree Murder-NG; Asslt 1st degree-GUILTY; Asslt 2nd degree-GUILTY; reckless endangerment-GUILTY - HQL REVOKED
HQL-2016-006833	Assault 1st; Assault 2nd; Resit/Interfere with Arrest - ALL CHARGES DISMISSED
HQL-2014-012371	Armed Robbery; Robbery; Firearm Use/Fel-Viol Crime; Rogue and Vagabond; Assault 2nd; Theft 100 to under 1500
HQL-2016-010741	Burglary 4th-PBJ Supervised(ended)
HQL-2017-017704	could not find any criminal records
HQL-2017-013120	could not find any criminal records
HQL-2017-013054	could not find any criminal records
HQL-2015-014591	Guilty - School: Trespass on Ground/PBJ supervised / Guilty - CDS: Poss-Marijuana/PBJ Unsupervised
HQL-2017-004166	Reckless Endangerment-GUILTY; Discharge Firearm in Metro Area-NP - HQL REVOKED
HQL02015-001632	Assault 2nd; Handgun on Person; Assault 1st - All charges NP
HQL-2016-014004	cannot find any records
HQL-2013-002560	Regulated Firearm Stolen-Possess/Sell/Transfer/Dispose Of-GUILTY - HQL REVOKED
HQL-2014-004833	Assault 1st-dismissed; Assault 2nd-NP; Assault 2nd-PBJ unsupervised
HQL-2017-016140	no open criminal records found
HQL-2017-01442	no open criminal records found
HQL-2017-023584	no open criminal records found
HQL-2015-016181	Assault 1st; Assault 2nd; Reckless Endangerment - All charges NP
HQL-2016-022161	CDS;Poss w/Intent Dist: Narc; CDS;Possess-Not Marijuana
HQL-2017-013164	could not find any criminal records
HQL-2017-020712	could not find any criminal records
HQL-2014-013148	Assault 2nd PBJ; Child Abuse 2nd; Reckless Endangerment NP; Firearm Use-NP; Handgun in Vehicle-PBJ
HQL-2016-002313	Assault 2nd-NP; Mal Dest Prop-NP - \$1,000; Burglary 4th-GUILTY - HQL REVOKED
HQL-2014-008268	GUILTY - Assault 2nd; Handgun on Person - HQL REVOKED
HQL-2014-006710	Murder 1st; Murder 2nd; Assault 1st; Assault 2nd; Deadly Weapon-Int/Injure
HQL-2015-002957	Assault 1st Noell Pros; Assault 2nd Stet
HQL-2016-007986	Att 1st Degree Murder; Att 2nd Degree Murder; Assault 1st; Firearm Use-Fel/Viol Crime; Assault 2nd; Handgun on Person; Dangerous Weapon-conceal - All Charges NP
HQL-2017-013742	no open criminal records found
HQL-2017-008665	cannot find any criminal records
HQL-2017-020215	cannot find any criminal records
HQL-2016-022719	Assault 1st; Assault 2nd; Reckless Endangerment; Deadly Weapon-Int/Injury - All Acquitted
HQL-2017-005035	no open criminal records found
HQL-2017-002939	no open criminal records found
HQL-2016-024626	Assault 1st-NP; Assault 2nd-PBJ; Reckless Endangerment-NP
HQL-2017-022283	Assault 1st; Assault 2nd
HQL-2014-014000	Rape 1st; Rape 2nd; Assault 1st; Assault 2nd; False Imprisonment
HQL-2015-016047	Stalking - NP; Harras-Dismised; Assault 1st-Dismised; Assault 2nd-Dismised; False Imprisonment-Dismised; Firearm Use-Dismised

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HQL-2017-020824	no open criminal records found
HQL-2016-014661	CDS PID - PBJ; CDS Poss - NP
HQL-2014-009305	cannot find any records
HQL-2015-013298	Assault 1st; Assault 2nd; reckless endangerment; firearm use/fel-viol crime - All NP
HQL-2015-007661	cannot find any records
HQL-2013-002857	handgun in vehicle-GUILTY; handgun on person-NP; assault 1st-NP; Assaulty 2nd-GUILTY - HQL REVOKED
HQL-2017-014621	cannot find any records
HQL-2016-021942	Assault 1st; Assault 2nd - All Charges NP
HQL-2015-000287	cannot find any records
HQL-2014-001572	Assault 1st; Assault 2nd
HQL-2017-012286	cannot find any records
HQL-2014-004850	CDS: Poss w/intent to Dist:Narc; CDS: Possess-Not Marijuana; CDS: Poss w/Int to Dist; CDS: Possession-Marijuana
HQL-2014-006640	Sex Abuse Minor; Sex Off 4th; Assault 2nd - Mistril all charges
HQL-2015-005684	Assault 1st; Assault 2nd; Dangerous Weapon-Int/Injure
HQL-2015-012956	Assault 1st; Assault 2nd - dismissed on both cases
HQL-2016-022133	Assault 1st-NP; Assault 2nd-NG
HQL-2014-010681	Assault 2nd-NG; Assault 1st-NP
HQL-2017-010660	Assault 2nd; Burglary 1st - all dispositions NP
HQL-2016-012879	Burglary 1st plus 31 other charges - All Stet
HQL-2014-010678	could not find any criminal records
HQL-2017-013165	could not find any criminal records
HQL-2014-011095	Assault 1st-NP; Assault 2nd-Judgment Stayed; Reckless Endangerment-NP; Firearm Use/Felony/Violent Crime-NP
HQL-2017-012864	Attempted 1st Degree Murder; Attempted 2nd Degree Murder; Use Handgun/Crime of Viol/Comm - All Dispositions: Not Guilty
HQL-2017-016317	no open criminal records found
HQL-2014-011600	Assault 1st; Assault 2nd - NP on both cases
HQL-2017-017352	no open criminal records found
HQL-2015-000437	Assault 1st; Att 2nd Deg Murder - Both NP Assault 2nd-Merged; Reckless Endangerment-PBJ
HQL-2015-008799	Assault 1st; Assault 2nd; Reckless Endangerment; Mal Dest Prop - \$1,000
HQL-2014-012839	cannot find any criminal records
HQL-2014-012952	Assault 1st; Assault 2nd; Theft less \$1,000 - All charges NP
HQL-2015-012508	Handgun on Person - NP/Assault 2nd - PBJ; Reckless Endangerment - NP
HQL-2014-014474	Sex Offense 3rd - Guilty on 8/17/2016 - HQL REVOKED
HQL-2014-011588	GUILTY - Sex Offense Minor; Handgun on Person on 7/1/2015 - HQL REVOKED
HQL-2017-018875	no open criminal records found
HQL-2017-009849	Burglary 3rd; Burglary 4th; Assault 2nd - All dispositions NP
HQL-2014-015161	Assault First Degree - Nolle Pros
HQL-2015-006744	GUILTY - CDS Possess with intent to Distribute - HQL REVOKED
HQL-2014-014935	Assault 1st-NP; Assault 2nd-NG; Dangerous Weapon-NG; Reckless Endangerment-JA
HQL-2016-010515	could not find any criminal records

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HQL-2015-003185	Burglary 1st; Con-Burglary; Theft less \$1,000; Mal Dest Prop/Valu - \$1,000
HQL-2015-003945	CDS: Poss w/intent to Distri-Narc (total 38 charges) NP on all charges
HQL-2017-021726	could not find any active criminal records
HQL-2015-006424	Assault 1st-NG; Assault 2nd-NG; Firearm Use-NP; Reckless Endangerment-NG
HQL-2017-020137	no open criminal records found
HQL-2017-010139	Burglary 3rd-Dismissed; Assault 2nd-Dismissed; Assault 2nd-Stet; Burglary 4th-Stet
HQL-2015-009934	Assault 1st; Assault 2nd
HQL-2016-008163	Assault 2nd - NP
HQL-2016-005137	Assault 1st-NP; Assault 2nd-NG; Reckless Endangerment-NG; Mal Dest Prop - \$1,000-NG
HQL-2017-011434	Assault 1st - Dismissed; Assault 2nd - Dismissed/NP; Dangerous Weapon-Int/Injure - NP
HQL-2015-010196	Assault 1st-dismissed; Assault 2nd-dismissed; Assault 2nd-judgment of Acquital; Dangerous Weapon-Int/Injure-Judgment of Acquital
HQL-2015-016143	Reckless Endangerment-Guilty; Mal Dest prop - \$1,000-NP; assault 1st-NP - HQL REVOKED
HQL-2016-007987	Handgun on Person; Assault 2nd; Assault 1st; Reckless Endangerment; Firearm Use/Fel-Viol Crime - NP all charges
HQL-2015-012533	Assault 1st-NP; Assault 2nd-Judgment Stayed
HQL-2017-003265	could not find any active criminal records
HQL-2015-014219	Assault 1st
HQL-2017-014830	could not find any active criminal records
HQL-2017-023268	could not find any active criminal records
HQL-2015-014357	Assault 1st-NP; Assault 2nd
HQL-2015-015700	Assault 2nd - NP
HQL-2016-012389	Burglary 4th; MDOP + 1,000; Disorderly Conduct; Burglary 3rd - All cases Dismissed
HQL-2015-017331	Burglary 1st-NP; MDOP/Valu - \$1,000-Stet; Theft less \$1,000-Stet; Cred Card: Steal Another's-Stet
HQL-2016-012340	Assault 1st; Assault 2nd - NP on both cases
HQL-2015-017898	GUILTY - Reckless Endangerment - HQL REVOKED
HQL-2016-011302	GUILTY - Assault 2nd; Reckless Endangerment - HQL REVOKED
HQL-2017-016615	no open criminal records found
HQL-2016-007872	Assault 1st-Dismissed; Assault 2nd-Stet; Mal Dest Prop/Valu \$1,000-Stet; Theft less than 100-Dismissed-Stet
HQL-2016-008578	Kidnapping; Assault 2nd; Sex Off 4th-Sex Contact
HQL-2017-009928	Assault 1st; Assault 2nd; Reckless Endangerment; Theft less \$1,000; robbery
HQL-2016-012237	Burglary 1st; Burglary 4th-dwelling; Burglary 4th-theft; Theft less 1000; Burglary 3rd - All charges Stet
HQL-2016-012999	CDS; Possess Marijuana 10GM+; CDS; Poss Paraphernalia - All charges NP
HQL-2016-020714	Assault 1st; Assault 2nd; Reckless Endangerment - All cases NP
HQL-2016-013488	CDS; Possess-Not Marijuana-GUILTY - HQL REVOKED
HQL-2016-024773	Assault 1st-NP; Assault 2nd-Guilty; Reckless Endangerment-Guilty - HQL REVOKED
HQL-2016-027380	Armed Robbery; Reckless Endangerment; Assault 2nd; Assault 1st
HQL-2016-014448	Assault 1st; Firearm Use/Fel-Viol Crime; Assault 2nd; Reckless Endangerment; Handgun in Vehicle;
HQL-2016-017379	Handgun on Person; Mal Dest Prop/Valu-\$1,000
HQL-2016-017379	Assault 1st-NP; Assault 2nd-NP; Reckless Endangerment-PBj; Theft less \$1,000-Stet

MSP001226

HQL-2017-004676	Sex Abuse Minor:House/Fam; Sex Offense 3rd; Assault 2nd; Sex Offense 4th-Sex Contact; Sex Offense 2nd; Sex Abuse Minor/Cont Course Cond
HQL-2017-012206	kidnapping; Assault 2nd; Handgun on Person; False Imprisonment
HQL-2017-000859	could not find any criminal records
HQL-2017-020420	no open criminal records found
HQL-2017-000870	could not find any criminal records
HQL-2016-025144	Assault 1st-Dismissed; Assault 2nd-Stet
HQL-2016-020702	Assault 1st; Assault 2nd; Firearm Use/Fel Viol Crime; Reckless Endangerment - All cases NP
HQL-2015-015685	Harrass - all charges NP
HQL-2015-006620	nothing beyond 1992
HQL-2015-001341	GUILTY - Handgun in Vehicle on 7/30/2015 - HQL REVOKED
HQL-2015-013162	Handgun on Person (NY charge)/Pled down to disorderly conduct
HQL-2014-009152	Handgun on Person - PBJ / all other charges NP
HQL-2014-007930	Poss of Controlled Substance
HQL-2016-012237	MDOP + 1,000; Harass; A Course of Conduct; Elec Mail Harrass
HQL-2017-013506	Handgun in Vehicle; Handgun on Person; Reg Firearm:Illegal Possession
HQL-2016-024877	Extortion-Threat Verbally; Theft Scheme 1000-10000; Conspiracy Theft Scheme 1000-10000
HQL-2014-001528	Extortion-Threat Verbally; Theft Scheme 1000-10000; Conspiracy Theft Scheme 1000-10000
HQL-2017-014394	Extortion-Threat Verbally; Theft Scheme 1000-10000; Conspiracy Theft Scheme 1000-10000
HQL-2017-011118	Assault 2nd-NP; Mal Dest Prop + 1,000
HQL-2017-017035	Assault 2nd - NG
HQL-2016-002967	Assault 2nd; School:Disturb Operation - All dispositions: Stet

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**Declaration Exhibit 7**

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# MARYLAND STATE POLICE

Maryland Department of State Police / Licensing Division  
1111 Reisterstown Road  
Pikesville, Maryland  
Office: (410) 653.4500 / Fax: (410) 653.4036

## ADVISORY

LD-HQL-17-003

NOVEMBER 17, 2017

### INTERPRETATION OF “RECEIVE” IN PS §5-117.1

PUBLIC SAFETY §5-117.1(c) states that “A person may purchase, rent, or receive a handgun only if the person:

(1) (i) possesses a valid handgun qualification license issued to the person by the Secretary in accordance with this section;...”

The Maryland State Police (MSP) has applied the ruling in *Chow v. State*, 393 Md. 431 (2006) to interpret the definition of “receive” as it pertains to PS §5-117.1(c). *Chow* held “the temporary gratuitous exchange or loan of a regulated handgun between two adult individuals, who are otherwise permitted to own and obtain a regulated handgun, does not constitute an illegal “transfer” of a firearm....” The MSP views “transfer” and “receive” as equivalent for purposes of Maryland’s firearms laws and interprets “receive” as including the gratuitous **permanent** exchange of title or possession, but excluding temporary gratuitous exchanges or loans of handguns.

Therefore, an individual, not otherwise prohibited from owning or possessing regulated firearms, is not required to possess an active HQL in order to borrow a regulated firearm from another individual on a temporary basis.

If you have any questions regarding this matter, please contact the Handgun Qualification License Unit, by email, at [msh.hql@maryland.gov](mailto:msh.hql@maryland.gov), or call the Licensing Division at 410-653-4500. Thank you for your attention to this matter.

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JA0216

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## **Declaration Exhibit 8**

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DOUGLAS F. GANSLER  
ATTORNEY GENERAL

KATHERINE WINFREE  
Chief Deputy Attorney General

JOHN B. HOWARD, JR.  
Deputy Attorney General



DAN FRIEDMAN  
Counsel to the General Assembly

SANDRA BENSON BRANTLEY  
BONNIE A. KIRKLAND  
KATHRYN M. ROWE  
Assistant Attorneys General

THE ATTORNEY GENERAL OF MARYLAND  
OFFICE OF COUNSEL TO THE GENERAL ASSEMBLY  
March 12, 2013

The Honorable Sam Arora  
Maryland House of Delegates  
House Office Building, Room 224  
Annapolis, Maryland 21401

**Re: Senate Bill 281, The "Firearm Safety Act of 2013"**

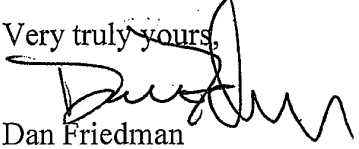
Dear Delegate Arora:

You have asked for my advice about the meaning of the word "receive" as used in Senate Bill 281, the "Firearm Safety Act of 2013." As you know, the bill would require people to possess a valid handgun qualification license to "purchase, rent, or receive" a handgun. Your question is whether a temporary transferee would be required to obtain such a license.

The answer is, of course, a matter of statutory interpretation and a reviewing court's job will be to try to determine the legislature's intent. Absent a clear manifestation of a contrary intent, however, I think a court will very likely interpret "receive" in the same spirit that it interpreted "transfer" in a recent handgun-related case, *Chow v. State*, 393 Md. 431 (2006). In *Chow*, the Court interpreted "transfer" to be limited to permanent transfers. It specifically held that temporary exchanges or loans did not meet the definition. Under that same understanding, someone "receives" a handgun when they accept the permanent "transfer" of possession, not a temporary exchange or loan. It is also my understanding that the drafters of SB 281 intended to adopt this view. Thus, if someone who doesn't have a handgun qualification license were to obtain possession of a handgun on a temporary basis with the intent to return it to the owner, she would not violate the statute. Of course, the legislature is free to manifest a contrary intent.

I hope this assists you.

Very truly yours,

  
Dan Friedman  
Counsel to the General Assembly

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## **Declaration Exhibit 9**





# MARYLAND STATE POLICE

Maryland Department of State Police / Licensing Division  
1111 Reisterstown Road  
Pikesville, Maryland  
Office: (410) 653.4500 / Fax: (410) 653.4036

## ADVISORY

LD-HQL-17-004

NOVEMBER 17, 2017

### ALTERNATIVE AMMUNITION FOR HANDGUN QUALIFICATION LICENSE (HQL) LIVE FIRE TRAINING COMPONENT

PUBLIC SAFETY §5-117.1(c)(3)(iii) requires a firearms orientation component that demonstrates the person's safe operation and handling of a firearm, which includes, as required by COMAR 29.03.01.29.C(4), a practice component in which the applicant safely fires at least one round of live ammunition.

The Maryland State Police (MSP) has received several requests to review alternative non-lethal, marking projectiles to satisfy the "live fire" component of the HQL training requirement. The MSP has determined that the use of non-lethal marking projectiles would meet the HQL "live fire" training requirement provided that the non-lethal marking projectile meets the following requirements:

- 1) meets the definition of "ammunition" as defined in Public Safety §5-133.1(a): "a cartridge, shell, or any other device containing explosive or incendiary material designed and intended for use in a firearm;" and
- 2) can be fired from a firearm as defined in Public Safety §5-101(h)(1)(i): "a weapon that expels, is designed to expel, or may readily be converted to expel a projectile by the action of an explosive."

If you have any questions regarding this matter, please contact the Handgun Qualification License Unit, by email, at [mshql@maryland.gov](mailto:mshql@maryland.gov), or call the Licensing Division at 410-653-4500. Thank you for your attention to this matter.

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JA0220

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## **Declaration Exhibit 10**



LARRY HOGAN  
GOVERNOR

BOYD K. RUTHERFORD  
LT. GOVERNOR

STATE OF MARYLAND  
MARYLAND STATE POLICE

Licensing Division  
1111 Reisterstown Road  
Pikesville, Maryland 21208  
410-653-4500



COLONEL  
WILLIAM M. PALLOZZI  
SUPERINTENDENT

September 30, 2016

Mr. David Deanovich  
Spartan Tactical & Police Supply LLC  
5735 Industry Lane, Suite 104  
Frederick MD 21704

Dear Mr. Deanovich,

On August 19, 2016, the Maryland Department of State Police, hereinafter referred to as MDSP, received a request for our review of the Ultimate Training Munitions (UTM) Target Shooting Ammunition for approval and use to meet the required "live fire component" for the Handgun Qualification License and the Handgun Permit Training Course. The MDSP has reviewed your request, and the following information is offered.

The UTM product, manufactured by Ultimate Training Munitions, expels a marking projectile by the action of an explosive charge. This type of training ammunition can be fired from special-purpose weapons or converted standard firearms.  
<https://www.utmworldwide.com>.

The MDSP has determined that the use of UTM Target Shooting Ammunition, or similar ammunition, would meet the Handgun Qualification License training criteria, Public Safety 5-117(d)(3)(iii) and COMAR 29.03.01.29.C(4), for demonstrating the applicant's safe operation and handling of a firearm. The MDSP has determined that the use of UTM Target Shooting Ammunition, or similar ammunition, would meet the Handgun Permit Training Course criteria, Public Safety 5-306(a)(5)(iii) and COMAR 29.03.02.05.C(4), for demonstrating the applicant's safe operation and handling of a firearm.

Therefore, the MDSP is in support of and approves your request to use UTM Target Shooting Ammunition to meet the required "live fire component" for the Handgun Qualification License and the Handgun Permit Training Course. A COMAR Amendment, as well as a Licensing Division's Bulletin to Qualified Handgun Instructors, will be forthcoming.

MSP000270

JA0222

Mr. David Deanovich  
September 30, 2016  
Page Two

Thank you, once again, for taking time from your schedule to express your interest in this matter. You may be assured of my continued cooperation in all matters of mutual concern.

Sincerely,

*Andy R. Johnson – Captain*

Andy R. Johnson – Captain  
Commander, Licensing Division  
Maryland Department of State Police

ARJ:cmh



LARRY HOGAN  
GOVERNOR

BOYD K. RUTHERFORD  
LT. GOVERNOR

STATE OF MARYLAND  
MARYLAND STATE POLICE  
Licensing Division  
1111 Reisterstown Road  
Pikesville, Maryland 21208  
410-653-4500



COLONEL  
WILLIAM M. PALLOZZI  
SUPERINTENDENT

February 2, 2016

The Honorable John W.E. Cluster, Jr  
Maryland House of Delegates  
9607 Dixon Avenue  
Baltimore MD 21234

Dear Delegate Cluster:

Thank you for your correspondence to Attorney General Brian E. Frosh, dated November 12, 2015, concerning the use of Simunition Marking Munitions to meet the required "live fire component" for the Handgun Qualification License. The Maryland Department of State Police, hereinafter referred to as MDSP, has reviewed your request, and the following information is offered.

The Simunition product, manufactured by General Dynamics, expels a marking projectile by the action of an explosive charge. This type of training ammunition can be fired from special-purpose weapons or converted standard firearms.

The MDSP has determined that the use of Simunition Marking Munitions, or similar training ammunition, would meet the Handgun Qualification License training criteria, Public Safety § 5-117(d)(3)(iii) and COMAR 29.03.01.29.C(4), for demonstrating the applicant's safe operation and handling of a firearm. This is so because the weapon discharging the round would be a "firearm" under Public Safety § 5-101(h) and because the Simunition round does expel a projectile by action of an explosive charge and would be considered "live ammunition."

Therefore, the MDSP is in support of and approves your request to use Simunition Marking Munitions to meet the required "live fire component" for the Handgun Qualification License. A COMAR Amendment, as well as a Licensing Division's Bulletin to Qualified Handgun Instructors, will be forthcoming.

Thank you, once again, for taking time from your schedule to express your interest in this matter. Should you have any additional questions, please do not hesitate to contact me, by telephone, at 410-653-4502, or by email at [adam.stachurski@maryland.gov](mailto:adam.stachurski@maryland.gov). You may be assured of my continued cooperation in all matters of mutual concern.

Sincerely,

Adam J. Stachurski – Captain  
Commander, Licensing Division  
Maryland Department of State Police

AJS:cmh

MSP000272

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# **EXHIBIT 8**

## **Code of Maryland Regulations**

### **29.03.01.26. Handgun Qualification License -Generally.**

A. Except as provided in §B of this regulation, a person shall possess a valid Handgun Qualification License before the person may purchase, rent, or receive a handgun.

B. A person is not required to possess a Handgun Qualification License if the person:

(1) Possesses valid credentials or retirement credentials from a law enforcement agency of the United States, the State, or any local law enforcement agency in the State;

(2) Is an active or retired member of the armed forces of the United States or the National Guard, and possesses a valid military identification card; or

(3) Purchases, rents, or receives an antique, curio, or relic firearm, as defined in federal law or in determinations published by the Bureau of Alcohol, Tobacco, Firearms and Explosives.

C. A person who has a valid permit issued under Public Safety Article, Title 5, Subtitle 3, Annotated Code of Maryland may submit a written request to the Secretary for a Handgun Qualification License without submitting the Handgun Qualification License application or fee under Regulation .28 of this chapter.

### **29.03.01.27. Handgun Qualification License -Eligibility.**

A. Exemptions. A person is not required to possess a Handgun Qualification License to purchase a handgun if the person satisfies one of the exceptions set forth in Regulation .26B of this chapter.

B. Qualifications. In accordance with Public Safety Article, §5-117.1(d), Annotated Code of Maryland, a person is eligible for issuance of a Handgun Qualification License only if the person:

(1) Is 21 years old or older;

(2) Is a resident of the State; and

(3) Is not prohibited from possessing a handgun under Regulation .03 of this chapter or otherwise prohibited from purchasing or possessing a handgun under federal or State law.

### **29.03.01.28. Handgun Qualification License -Application.**

A. A Handgun Qualification License application shall be submitted in the format prescribed by the Secretary.

B. The Handgun Qualification License application shall include:

(1) The applicant's name, address, driver's license or photographic identification soundex number, place and date of birth, height, weight, race, sex, eye and hair color, occupation, and home and work telephone numbers;

(2) Proof of the applicant's completion of, or exemption from, a Firearms Safety Training Course within the previous 3 years, in the manner prescribed by the Secretary on the application;

(3) A complete set of the applicant's fingerprints, taken and submitted in the manner prescribed by the Secretary on the application;

(4) Authorization by the applicant to the Department of Health and Mental Hygiene, or any other similar agency or department of another state, to disclose to the Department of State Police information as to whether the applicant:

(a) Suffers from a mental disorder and has a history of violent behavior;

(b) Has been voluntarily admitted for more than 30 consecutive days to a mental health facility or an institution that provides treatment or services for individuals with mental disorders; or

(c) Has been involuntarily committed to a mental health facility or an institution that provides treatment or services for individuals with mental disorders; and

(5) A declaration by the applicant, under the penalty of perjury, that the applicant is not prohibited under federal or State law from possessing a handgun; and

(6) A declaration by the applicant, under the penalty of perjury, that all information in the application is true and accurate.

C. The application must be accompanied by a nonrefundable payment of \$50.

D. A Handgun Qualification License expires 10 years from the date of issuance.

#### **29.03.01.29. Handgun Qualification License -Training Requirement.**

A. Except as provided in §B of this regulation, an applicant shall complete a Firearms Safety Training Course and submit a Firearms Safety Training Certificate issued by a Qualified Handgun Instructor. The submission of the Firearms Safety Training Certificate shall constitute proof that the applicant satisfactorily completed a Firearms Safety Training Course.

B. An applicant does not need to complete a Firearms Safety Training Course if the applicant:

(1) Has satisfactorily completed a firearms training course approved by the Secretary as an exemption from the Firearms Safety Training Course;



(2) Has satisfactorily completed a course of instruction in competency and safety in the handling of firearms as prescribed by the Department of Natural Resources under Natural Resources Article, §10-301.1, Annotated Code of Maryland;

(3) Is a Qualified Handgun Instructor in accordance with Regulation .37 of this chapter;

(4) Is an honorably discharged member of the armed forces of the United States or the National Guard;

(5) Is a former law enforcement officer of the State or a local law enforcement agency in the State who has successfully completed initial law enforcement training;

(6) Is an employee of an armored car company and has a permit issued under Public Safety Article, Title 5, Subtitle 3, Annotated Code of Maryland; or

(7) Lawfully owns a regulated firearm.

C. A Firearms Safety Training Course shall consist of a minimum of 4 hours of instruction by a Qualified Handgun Instructor and include the following minimum curricula.

(1) State Firearm Law. Overview of the State firearm laws, including discussion of what constitutes a regulated firearm, how to properly purchase or transfer a firearm, where allowed to carry or transport a firearm, when necessary to possess a carry permit, and who is prohibited from possessing firearms.

(2) Home Firearm Safety. Overview of handgun and firearm safety in the home, including discussion of access to minors, locking and storing of firearms, and use of safety devices, such as secure lock boxes.

(3) Handgun Mechanisms and Operation. Overview of the proper operation and safe handling of a handgun, including cleaning and maintenance, the loading and unloading of ammunition, and the differences between revolvers and semi-automatic handguns.

(4) Operation and Handling Demonstration. Orientation that demonstrates the applicant's safe operation and handling of a firearm, including a practice component in which the applicant safely fires at least one round of live ammunition.

#### **29.03.01.30. Handgun Qualification License -False or Omitted Information.**

A. An applicant shall not provide false information on an application for a Handgun Qualification License, or omit significant information on the application, or cause false information to be given in connection with the verification investigation.

B. Any knowing material omission or false statement may be considered grounds for denial of a license or for criminal prosecution.

**29.03.01.31. Handgun Qualification License -Investigation.**

A. Upon receipt of a properly completed application, the Secretary shall conduct an investigation of the applicant for the purpose of determining whether the applicant satisfies the criteria for issuance of a license.

B. Information discovered during the investigation may be used against an applicant who has provided false or misleading information or has omitted information on the application.

**29.03.01.32. Handgun Qualification License -Issuance and Denial.**

A. In accordance with Public Safety Article, §5-117.1(h), Annotated Code of Maryland, the Secretary shall issue a Handgun Qualification License or provide a written denial of the application within 30 days after receiving a properly completed application.

B. A properly completed application satisfies all the requirements prescribed by the Secretary.

C. A written denial provided by the Secretary shall contain the reasons the application was denied and a statement of the applicant's appeal rights.

D. In accordance with Public Safety Article, §5-117.1(h)(2), Annotated Code of Maryland, an individual whose fingerprints have been submitted to the Central Repository, and whose application has been denied, may request that the record of the fingerprints be expunged by obliteration.

**29.03.01.33. Handgun Qualification License -Replacement.**

A. A person may submit a written request to the Secretary for a replacement license if the license is lost or stolen.

B. A request for a replacement Handgun Qualification License must be accompanied by a nonrefundable fee of \$20.

C. Upon receipt of a properly submitted request, the Secretary shall issue a replacement license within a reasonable time if the applicant is not otherwise disqualified from possessing a Handgun Qualification License.

**29.03.01.34. Handgun Qualification License -Renewal.**

A. A Handgun Qualification License may be renewed for successive periods of 10 years.

B. The Handgun Qualification License renewal application shall be submitted in the format prescribed by the Secretary.

C. The Handgun Qualification License renewal application shall include:

(1) The applicant's name, address, driver's license or photographic identification soundex number, place and date of birth, height, weight, race, sex, eye and hair color, occupation, and home and work telephone numbers;

(2) The identification number from the applicant's prior Handgun Qualification License;

(3) A declaration by the applicant, under the penalty of perjury, that the applicant is not prohibited under federal or State law from possessing a handgun; and

(4) A declaration by the applicant, under the penalty of perjury, that all information in the application is true and accurate.

D. The renewal application must be accompanied by a nonrefundable payment of \$20.

E. Upon receipt of a properly submitted renewal application, the Secretary shall issue a renewed Handgun Qualification License within a reasonable time if the applicant is not otherwise disqualified from possessing a Handgun Qualification License.

#### **29.03.01.35. Handgun Qualification License -Revocation.**

A. The Secretary may revoke a Handgun Qualification License on a finding that the licensee no longer satisfies the qualifications set forth in Public Safety Article, §5-117.1(d), Annotated Code of Maryland.

B. The Secretary shall provide written notification to a person whose Handgun Qualification License is revoked.

C. A written notice of revocation shall contain the reasons the license was revoked and a statement of the person's appeal rights.

D. A person whose Handgun Qualification License is revoked shall return the license to the Licensing Division, Department of State Police within 5 days after receipt of the notice of revocation.

#### **29.03.01.36. Handgun Qualification License -Appeal.**

A. A person whose original or renewal Handgun Qualification License application is denied or whose Handgun Qualification License is revoked may submit a written request to the Secretary for a hearing within 30 days after the date that the written notice of denial or revocation was sent by the Secretary.

B. Upon receipt of a valid request, the Secretary shall grant a hearing within 15 days and the hearing shall be held in the county of the legal residence of the person requesting the hearing.

C. The hearing and any subsequent proceedings of judicial review shall be conducted in accordance with State Government Article, Title 10, Subtitle 2, Annotated Code of Maryland.

**29.03.01.37. Qualified Handgun Instructor -Generally.**

A. A person is a Qualified Handgun Instructor if the person has:

(1) A valid Qualified Handgun Instructor License issued by the Secretary in accordance with Regulation .38 of this chapter;

(2) Been recognized by the Maryland Police and Correctional Training Commissions; or

(3) A valid instructor certification issued by a nationally recognized firearms organization.

B. A Qualified Handgun Instructor shall provide proof of certification or qualification to the Secretary before providing instruction to an applicant for a Handgun Qualification License or a handgun permit.

C. Upon a person's satisfactory completion of an applicable firearms training course, a Qualified Handgun Instructor shall:

(1) Provide the person a Firearms Safety Training Certificate that includes:

(a) The person's name and date of birth;

(b) The instructor's name;

(c) Whether the completed course was a Firearms Safety Training Course or a Handgun Permit Training Course;

(d) The length in hours of the course;

(e) The date of course completion;

(f) The location of the training;

(g) A declaration certifying that the course met the minimum standards prescribed by the Secretary; and

(h) A declaration certifying that the person completed the course; and

(2) Submit the requisite information to the Licensing Division, Department of State Police, as prescribed by the Secretary.

**29.03.01.38. Qualified Handgun Instructor License -Application.**

A. If a person has not been recognized by the Maryland Police and Correctional Training Commissions or does not have a valid certification issued by a nationally

recognized firearms organization, then the person shall obtain a Qualified Handgun Instructor License before acting as a Qualified Handgun Instructor.

B. A Qualified Handgun Instructor License application shall be submitted in the format prescribed by the Secretary.

C. The Qualified Handgun Instructor License application shall include:

(1) The applicant's name, address, driver's license or photographic identification soundex number, place and date of birth, height, weight, race, sex, eye and hair color, occupation, and home and work telephone numbers;

(2) Proof of the applicant's formal training in the care, safety, and use of handguns, including a minimum qualification score of 80 percent on a practical police course; and

(3) Proof of the applicant's minimum of 1 year of experience in instruction in the care, safety, and use of handguns.

D. Upon receipt of a properly completed application, the Secretary shall issue a Qualified Handgun Instructor License to the applicant within a reasonable time.

E. A Qualified Handgun Instructor License expires 4 years from the date of issuance.

#### **29.03.01.39. Qualified Handgun Instructor License -Renewal.**

A. A Qualified Handgun Instructor License may be renewed for successive periods of 4 years.

B. A Qualified Handgun Instructor License renewal application shall be submitted in the format prescribed by the Secretary.

C. The Qualified Handgun Instructor License renewal application shall include:

(1) The applicant's name, address, driver's license or photographic identification soundex number, place and date of birth, height, weight, race, sex, eye and hair color, occupation, and home and work telephone numbers; and

(2) Proof of the applicant's experience in instruction in the care, safety, and use of handguns within the past 4 years.

D. Upon receipt of a properly completed renewal application, the Secretary shall issue a renewed Qualified Handgun Instructor License within a reasonable time.

#### **29.03.01.40. Qualified Handgun Instructor License -Revocation.**

A. The Secretary may revoke a Qualified Handgun Instructor License for cause. Sufficient cause may include, but is not limited to, evidence of:

(1) Unsafe range practices;

(2) False reporting of Firearm Safety Training Course completion or Handgun Permit Training Course completion;

(3) Falsification of permit applicant qualification scores;

(4) Failure to satisfy the minimum requirements of training courses;

(5) Conviction for a criminal offense that would preclude the licensee from purchasing or possessing a firearm; or

(6) Conviction for a criminal offense involving the distribution, use, or possession of a controlled substance.

B. The Secretary shall provide written notification to a person whose Qualified Handgun Instructor License is revoked.

C. A written notice of revocation shall contain the reasons the license was revoked and a statement of the person's appeal rights.

D. A person whose Qualified Handgun Instructor License is revoked shall return the license to the Licensing Division, Department of State Police within 10 days after receipt of the notice of revocation.

#### **29.03.01.41. Qualified Handgun Instructor License -Appeal.**

A. A person whose original or renewal Qualified Handgun Instructor License application is denied or whose Qualified Handgun Instructor License is revoked may submit a written request to the Secretary for an informal review within 10 days after receipt of the notice of denial or revocation.

B. Upon receipt of a valid request, the informal review shall be conducted by a person designated by the Secretary who shall sustain or reverse the initial action and provide written notification of the decision to the person who requested the informal review within 30 days after the informal review.

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# **EXHIBIT 9**

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT COURT OF MARYLAND**

MARYLAND SHALL ISSUE, INC., *et al.*, \*

*Plaintiffs,* \*

v. \* Civil Case No. 16-cv-3311-ELH

LAWRENCE HOGAN, *et al.* \*

*Defendants.* \*

\* \* \* \* \*

**DECLARATION OF DONALD PICKLE**

I, First Sergeant Donald Pickle, under penalty of perjury, declare and state:

1. I am a First Sergeant in the Maryland State Police (“MSP”). I am more than 18 years of age and am competent to testify, upon personal knowledge, to the matters stated below.

2. I have been employed as a sworn officer by MSP since January 2000. During those 18 years, I served in a variety of State Police units, including Field Operations (Golden Ring Barracks), Aviation Command (Baltimore and Centreville Sections) and Licensing Division.

3. I have been employed as a sworn officer in MSP’s Licensing Division since October 2012, and have held the following positions within the Licensing Division: Firearms Registration Unit background investigator, Firearms Registration Unit Supervisor and Assistant Commander – Firearms Services.



4. Since April 2018, I have served as an Assistant Commander of MSP's Licensing Division. In this capacity, I am involved in the day-to-day operations of the HQL Unit, Firearms Registration Unit, and Handgun Permits Unit.

5. Through my work in the Licensing Division, I am familiar with the reporting from the Department of Public Safety and Correctional Services ("DPSCS") to MSP of an HQL applicant's or licensee's criminal history record information obtained after the date of the initial criminal history records check, based on the fingerprint records warehoused by DPSCS.

6. This reporting by DPSCS to MSP is mandated by the Firearm Safety Act of 2013, set forth in § 5-117.1(f)(7) of the Public Safety Article, which requires that DPSCS provide MSP with an HQL applicant's or licensee's criminal history record information obtained after the date of the initial criminal history records check.

7. Up through early October 2018, this mandatory reporting was accomplished through a weekly report, sent by DPSCS to MSP, that contained HQL applicants' or licensees' subsequent arrest information based on fingerprint matches.

8. Licensing Division personnel would then track those arrests in a regularly-kept log through the disposition of any criminal proceeding, and would revoke the HQL of any licensee convicted of an offense that rendered him or her ineligible for an HQL.

9. In or around the first week of October 2018, DPSCS, working with me and other Licensing Division personnel, created a more refined reporting system, such that

DPSCS transmits a daily notification of convictions that renders a licensee ineligible for an HQL.


10. Other than the mandatory reporting set forth in § 5-117.1(f)(7) of the Public Safety Article, there is no other statute or regulation of which I am aware that mandates the reporting of criminal history record information obtained after the date of an initial criminal history background check to MSP or any other law enforcement agency. Nor am I aware of any state or local policies or procedures that require such reporting.

11. I am aware that the plaintiffs in this litigation have claimed that “the fingerprint requirement is unnecessary for Defendants to locate and disarm handgun owners who are subsequently disqualified from handgun ownership because the 77R Handgun Registration process provided this ability.” This statement is not accurate.

12. While it is true that MSP was able to locate and disarm handgun owners prior to the fingerprint requirement when MSP was notified that the individual was subsequently disqualified from handgun ownership, I am unaware of any systematic or routine reporting of this information from any law enforcement agency, court system, or other criminal justice agency prior to enactment of the Firearm Safety Act and the HQL fingerprint requirement.

I declare and affirm under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

Date: 10/31/18

  
First Sergeant Donald Pickle  
Maryland State Police

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# **EXHIBIT 10**

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT COURT OF MARYLAND**

MARYLAND SHALL ISSUE, INC., *et al.*, \*

*Plaintiffs,* \*

v. \* Civil Case No. 16-cv-3311-ELH

LAWRENCE HOGAN, *et al.*, \*

*Defendants.* \*

\* \* \* \* \*

**DECLARATION OF CAPTAIN ANDREW J. ROSSIGNOL**

I, Captain Andrew J. Rossignol, under penalty of perjury, declare and state:

1. I am a Captain in the Maryland State Police (“MSP”). I am more than 18 years of age and am competent to testify, upon personal knowledge, to the matters stated below.

2. I have been a sworn officer with MSP since 2000. During the past 20 years, I have served in a variety of MSP units. Since September, 2018, I have served as Commander of the Licensing Division.

3. As the Commander of the Licensing Division, I manage and oversee all day-to-day operations of the sworn and civilian personnel within the Licensing Division’s Firearms Services Section and Professional Licensing Section. Within the Firearms Services Section is the Handgun Qualification License (“HQL”) Unit, Firearms Registration Unit, Handgun Permit Unit, and the Inspection and Compliance Billing Unit.

4. The HQL Unit of the Firearms Services Section is responsible for processing HQL applications and is comprised of 36 sworn troopers and 16 civilian personnel.

5. Attached hereto as Exhibit 1 is a chart derived from the records of the Licensing Division showing the number of HQL applications and Firearms Registration Applications (“FRS”) for the State of Maryland for calendar years 2017, 2018, 2019 and the first 9 months of 2020.

6. As reflected on Exhibit 1, the total number of transfers of regulated firearms in the State of Maryland in 2018 was 53,544, or an average of 1,030 per week. In 2019, the total number of transfers of regulated firearms in the State of Maryland was 53,726, or an average of 1,033 per week. In the first 39 weeks of 2020, the total number of transfers of regulated firearms in the State of Maryland was 71,548, or an average of 1,835 per week.

7. In 2018, the Licensing Division received 21,727 HQL applications, or an average of 417 HQL applications each week. Only 641 of the 21,727 HQL applications received in 2018 were denied.

8. In 2019, the Licensing Division received 20,083 HQL applications, or an average of 386 HQL applications each week. Only 769 of the 20,083 HQL applications received in 2019 were denied.

9. In the first 39 weeks of 2020, the Licensing Division received 46,903 HQL applications, or an average of 1,203 HQL applications each week. Only 1,413 of the 46,903 HQL applications received in the first 39 weeks of 2020 were denied.

10. I have reviewed the Declaration of Captain Andy Johnson dated August 15, 2018 and submitted in the case in support of the defendants’ Motion for Summary Judgment filed on August 17, 2018.

11. Since Captain Johnson's 2018 declaration, there have been some changes in the manner in which the Licensing Division handles HQL applications and issues HQLs to successful applicants.

12. The four-hour training sessions, which were formally conducted in a live classroom setting, are now conducted by way of a real time, bi-directional audio and video connection. A true and correct copy of MSP Bulletin LD-HQL-20-002 announcing this change is attached to this declaration as Exhibit 2.

13. In addition, effective October 1, 2020, the Licensing Division no longer prints and issues physical HQL license cards. Instead, the Licensing Division is in the process of transitioning to a system to provide an electronic license to successful HQL applicants. I expect the electronic licensing system to be in place by early 2021. In the meantime, the Licensing Division is issuing letters to successful HQL application in lieu of the printed and laminated cards that were issued through September 30, 2020. A true and correct copy of MSP Bulletin LD-HQL-20-003 announcing this change is attached to this declaration as Exhibit 3.

14. Captain Johnson left his position as Commander of the Licensing Division in September, 2018 and I succeeded him as Commander at that time.

15. During my tenure as Commander of the Licensing Division, every properly completed HQL application that has been submitted to MSP has been processed and formally approved or disapproved within 30 days of being submitted to MSP.

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I declare and affirm under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

Date: 11/23/20

  
\_\_\_\_\_  
Captain Andrew J. Rossignol  
Maryland State Police

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## **Declaration Exhibit 1**



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<b>Licensing Division Weekly (39) Report 09/25/2020 through 10/1/2020</b>	2017 Totals	2018 Totals	2019 Totals	2020 Totals	2017 Weekly Avg.	2018 Weekly Avg.	2019 Weekly Avg.	2020 Weekly Avg.	Current Week Totals (2020)
FRS Total Apps Received	51,851	53,544	53,726	71,548	997	1,030	1,033	1,835	2,455
FRS Disapprovals	175	206	245	424	3.4	4	4.7	10.9	19

HQL New	23,888	21,727	20,083	46,903	459	417.8	386.2	1,203	1,854
HQL "New Resident" Apps	0	0	0	890	0	0	0	22.8	19
HQL Disapprovals	566	641	769	1,413	10.9	12.3	14.8	36.2	54

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## **Declaration Exhibit 2**

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# MARYLAND STATE POLICE

Maryland Department of State Police / Licensing Division  
1111 Reisterstown Road  
Pikesville, Maryland  
Office: (410) 653.4500 / Fax: (410) 653.4036

## BULLETIN

LD-HQL-20-002

July 28, 2020

### Handgun Qualification License Virtual Training (**AMENDED**) and E-Mails

The COVID-19 pandemic has altered many processes and procedures associated with group gatherings. In an effort to better serve the citizens of Maryland, and taking into consideration the health and safety of our partner Qualified Handgun Instructors (QHIs) and customers, the Maryland Department of State Police, Licensing Division (MDSPLD), has re-evaluated the classroom instruction requirement for the Handgun Qualification License (HQL) training. Effective immediately, the MDSPLD is approving HQL classroom training, via two-way virtual platforms. This change in policy does not alleviate any of the HQL training requirements set below.

QHIs electing to participate in virtual HQL training will require a real time, bi-directional audio and visual connection between the QHI and the students. Pre-recorded presentations of any form are not acceptable.

The Firearms Safety Training Course must be instructed by a QHI and shall consist of a minimum of 4 hours of instruction, and include the following minimum curricula:

1. State Firearm Law: Overview of the State firearm laws, including discussion of what constitutes a regulated firearm, how to properly purchase or transfer a firearm, where allowed to carry or transport a firearm, when necessary to possess a carry permit, who is prohibited from possessing firearms and State law relating to minors, permissible levels of force and use of deadly force.
2. Home Firearm Safety: Overview of handgun and firearm safety in the home, including discussion of access to minors, locking and storing of firearms and use of safety devices, such as secure lock boxes.
3. Handgun Mechanisms and Operation: Overview of the proper operation and safe handling of a handgun, including cleaning and maintenance, the loading and unloading of ammunition and the differences between revolvers and semi-automatic handguns.

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# MARYLAND STATE POLICE

4. Operation and Handling Demonstration: Orientation component that demonstrates the person's safe operation and handling of a firearm, to include a "live fire" component, in which the applicant safely shoots the weapon. An applicant may not be required to fire in excess of 15 yards during qualifications.

QHIs are also reminded that the individual student/applicant's HQL account must be associated with the individual student/applicant's personal email address.

For further information on the HQL, please visit our website by clicking the following link: [Handgun Qualification License](#). You can also contact us, via email, at: [msh.hql@maryland.gov](mailto:msh.hql@maryland.gov).

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## **Declaration Exhibit 3**

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# MARYLAND STATE POLICE

**Maryland Department of State Police / Licensing Division**  
**1111 Reisterstown Road**  
**Pikesville, Maryland**  
**Office: (410) 653.4500 / Fax: (410) 653.4036**

## BULLETIN

**LD-HQL-20-003**

**September 18, 2020**

### **Discontinuing Printing of Handgun Qualification License Cards**

The Maryland Department of State Police, Licensing Division (MDSPLD) is constantly reviewing policy and procedures in order to enhance the experience of our customers, allied agencies, firearms instructors and dealers, all while being as fiscally responsible to the citizens of Maryland as possible. With this in mind, beginning October 1, 2020, the MDSPLD will discontinue printing Handgun Qualification License (HQL) Cards in their current form.

All HQL applicants approved for an HQL, on or after October 1, 2020, will receive, via US mail, a paper HQL, similar to the example below. This paper license, or an electronic copy of the license, must be presented to a dealer or any other person, prior to selling, renting, or transferring a handgun, in accordance with MD Public Safety §5-117.1 and COMAR 29.03.01.06. The discontinuation of printing of the HQL cards will expedite the final process of the HQL and ultimately decrease the time it takes for the applicant to receive their HQL.

Qualified Handgun Instructors (QHI) are also reminded that the individual student/applicant's HQL account must be associated with the individual student/applicant's personal email address.

For further information on the HQL, please visit our website by clicking the following link: [Handgun Qualification License](#). You may also contact us, via email, at: [msp.hql@maryland.gov](mailto:msp.hql@maryland.gov), and Regulated Firearms Dealers may contact us by utilizing the Livehelp feature within their Licensing Portal.

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# MARYLAND STATE POLICE



LARRY HOGAN  
GOVERNOR  
BOYD K. RUTHERFORD  
LT. GOVERNOR

STATE OF MARYLAND  
**MARYLAND STATE POLICE**  
1201 REISTERSTOWN ROAD  
PIKESVILLE, MARYLAND 21208-3899  
410-486-3101  
TOLL FREE: 1-800-525-5555  
TDD: 410-486-0577

October 1, 2020



COLONEL  
WOODROW W. JONES III  
SUPERINTENDENT

Name  
Street Address  
City, State, Zip

## HANDGUN QUALIFICATION LICENSE

Dear Name,

The Maryland State Police Licensing Division has reviewed and APPROVED your application for a Handgun Qualification License (HQL). This correspondence serves as your Handgun Qualification License.

Your Handgun Qualification License is valid for 10 years and is required to be presented anytime you intend to purchase, rent or receive a handgun in Maryland. This license is not a Handgun Carry Permit issued pursuant to the Public Safety Article, Title 5, Subtitle 3 and does not authorize you to wear, carry or transport a handgun.

During the issuance period, should you become ineligible to possess a handgun pursuant to State or Federal laws, your license will be revoked. Upon notification of a revocation you will be required to return your Handgun Qualification License to the Maryland State Police address listed below.

If your original or renewal Handgun Qualification License is lost or stolen, you may log in to your eGov account at <https://emdsp.mdsp.org/egov/Login.aspx> and order a replacement license. Replacement licenses require a nonrefundable replacement fee of \$20.

Commander  
Maryland State Police  
Licensing Division  
Handgun Qualification Unit  
1111 Reisterstown Road  
Pikesville, Maryland 21208

**Handgun Qualification License Number**  
**HQL-2020-XXXXXX**

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# **EXHIBIT 11**



**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND**

MARYLAND SHALL ISSUE, INC., *et al.*, \*

*Plaintiffs,* \*

v. \*

Civil Case No. 16-cv-3311-ELH

LAWRENCE HOGAN, *et al.*, \*

*Defendants.* \*

\* \* \* \* \*

**DECLARATION OF DANIEL W. WEBSTER**

I, Daniel W. Webster, under penalty of perjury, declare and state:

1. I am Professor of Health Policy and Management, Director of the Health and Public Policy Ph.D. Program, Deputy Director for Research at the Center for the Prevention of Youth Violence, and Director of the Johns Hopkins Center for Gun Policy and Research at the Johns Hopkins Bloomberg School of Public Health. I am more than 18 years of age and am competent to testify, upon personal knowledge, to the matters stated below.

2. I began my career in public safety research in 1985 as a Research Associate at the University of Michigan's School of Public Health, and have devoted most of my research since then to gun-related injuries and violence. I have a Master of Public Health degree from the University of Michigan and a doctorate in Health Policy and Management from the Johns Hopkins School of Public Health. This graduate training included many advanced courses in epidemiology, research methods, and statistical analysis.

3. Immediately prior to joining the faculty at Johns Hopkins, I directed a program on violence research at the Washington (D.C.) Hospital Center. I joined the faculty of the Johns Hopkins School of Public Health in 1992, and since 2010 have been a tenured Professor of Health Policy and Management with a joint appointment in the School of Education's Division of Public Safety Leadership. I teach graduate courses on violence prevention and research and evaluation methods at Johns Hopkins, direct the PhD program in Health and Public Policy, and serve on the steering committee of a pre- and post-doctoral training program in violence prevention research funded by the National Institutes of Health.

4. I have directed numerous studies related to gun violence and its prevention. I have published 121 articles in scientific, peer-reviewed journals, the vast majority of these addressed some aspect of violence and/or firearm injuries and their prevention. I am the lead editor of a recent book entitled Reducing Gun Violence in America: Informing Policy with Evidence and Analysis by Johns Hopkins University Press (2013), and I am the lead author for two chapters and co-author on three other chapters in this book. My curriculum vitae, detailing these publications, is attached as Exhibit 1 to this Declaration.

5. The Johns Hopkins Center for Gun Policy and Research was established to conduct rigorous research into gun policy questions, look objectively at all available data, and analyze and report the results. Where the data and research, considered objectively, support a particular policy, we say so. Where the data and research do not support a particular policy, we say that as well. Our goal is not to advance any particular policy or agenda, but to use data and research to inform public policy decisions.

6. I have been retained by the State of Maryland to render expert opinions in this case. I make this declaration on the basis of my training and expertise, the research discussed herein and in my expert report attached hereto as Exhibit 2, and the work that I have done in this case to date.

7. It is my opinion that laws that require citizens to obtain a permit to purchase a firearm (“PTP” laws), including Maryland’s requirement for a handgun qualification license (“HQL”), promote public safety and reduce firearms violence.

8. PTP laws are designed to reduce firearms violence in several ways. First, such laws discourage the diversion of legally-purchased firearms for criminal use by way of “straw purchases.” Straw purchases are transactions in which persons who are legally prohibited from purchasing a firearm (due to criminal history or other disqualifying events) recruit third-parties to purchase guns for them.

9. Without a PTP law, these straw purchases can be relatively quick, low-risk transactions. By contrast, many PTP laws, including Maryland’s HQL law, require prospective purchasers to be fingerprinted and complete firearms safety training. This increases the risk, time and money required to complete an illegal straw purchase and is therefore likely to deter individuals from participating in such a transaction.

10. Fingerprinting of firearms purchasers also promotes public safety by enabling law enforcement agencies to identify HQL holders who are subsequently convicted of offenses that disqualify them from owning a handgun. This allows police to remove firearms from the possession of such criminals.

11. Maryland's HQL law also promotes public safety and reduces firearms violence by requiring applicants to complete a four-hour firearms safety training course that includes instruction on the proper way to store handguns. This training is designed to increase proper firearm storage practices in the home and reduce the risk of accidental shootings, teen suicides, and shootings by troubled teens in schools and other settings. The majority of school shootings are committed by minors with guns brought from their homes. Surveys of gun owners show that unsafe gun storage is common and that gun owners who complete firearms safety training are more likely to store their guns locked and unloaded.

12. PTP laws can also reduce firearms violence by reducing impulse purchases of firearms by individuals who are angry or despondent and are considering taking a life. Requiring purchasers to be fingerprinted and take safety training means that purchasers need to engage in planning over a number of days, which can result in impulse buyers changing their minds. This is particularly important in the case of suicides because many suicidal acts take place within minutes or hours of a suicidal thought.

13. As set forth in my expert report, attached hereto as Exhibit 2, empirical evidence demonstrates that PTP laws are an effective means of reducing (1) the diversion of guns for criminal purposes;<sup>1</sup> (2) firearm homicides; and (3) suicides with firearms. Data also suggests that PTP laws may reduce serious injuries and death among law enforcement officers.

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<sup>1</sup> Exhibit 3, Daniel Webster *et al.*, *Preventing the Diversion of Guns to Criminals through Effective Firearm Sales Laws*, in *Reducing Gun Violence in America: Informing Policy with Evidence and Analysis* 109-22 (Webster, *et al.*, eds., Johns Hopkins Univ. Press 2013)

14. A study of Connecticut's PTP law found that the licensing requirement to purchase a firearm was associated with a statistically significant reduction in Connecticut's firearm homicide rates during the first decade that the law was in place, with no similar reduction in non-firearm homicides.<sup>2</sup> Connecticut's law has features similar to Maryland's, including a requirement that applicants be fingerprinted for enhanced background checks for handguns sold by private sellers and licensed firearm dealers, and a requirement that applicants complete an approved handgun safety course.

15. By contrast, another study showed an abrupt increase in firearm-related homicides in Missouri after that state repealed its handgun licensing requirement in 2007. The increase in firearm-related homicide in Missouri occurred at a time when there was no similar increase in surrounding states or the nation as a whole, and the state experienced an increase in the percentage of crime guns recovered by police that had been originally sold by in-state retailers.<sup>3</sup>

16. Studies of Missouri's and Connecticut's laws also have found the presence of firearm licensing requirements to be associated with lower rates of firearm-related suicides.<sup>4</sup>

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<sup>2</sup> Exhibit 4, Kara E. Rudolph, *et al.*, *Association Between Connecticut's Permit-to-Purchase Handgun Law and Homicides*, 105 Am. J. of Public Health 8, e49 (Aug. 2015).

<sup>3</sup> Exhibit 5, Daniel Webster, *et al.*, *Effects of the Repeal of Missouri's Handgun Purchaser Licensing Law on Homicides*, 91 J. of Urban Health 2, 293 (2014).

<sup>4</sup> Exhibit 6, Cassandra K. Crifasi, *et al.*, *Effects of Changes in Permit-to-Purchase Handgun Laws in Connecticut and Missouri on Suicide Rates*, 79 Preventive medicine 43 (2015).

17. My colleagues and I studied the effects of several state firearm policies on homicide rates in large urban counties and found that adopting permit to purchase (PTP) requirements for handguns was associated with a statistically significant 11% reduction in firearm homicide rates. Using the data from this study, I derived separate estimates for the initial effects of Maryland's Firearm Safety Act ("FSA") that included the HQL requirement on homicide rates. Because the study period included 2015, when firearm homicide rates surges in Baltimore City immediately following the riots over the in-custody death of Freddie Gray, Jr., estimates of the law's impacts in Baltimore or statewide would be biased in the direction of more homicides due to the historical confounder of major riots. Therefore, we specified statistical models that allowed the effects of the FSA/HQL requirement to vary between Baltimore City and the other large urban counties (Anne Arundel, Baltimore, Montgomery, and Prince Georges). The model estimates a statistically significant ( $p < .001$ ) 48 percent reduction in firearm homicide rates in these large urban counties associated with Maryland's FSA law and HQL requirement and 28 percent higher firearm homicide rates in Baltimore City (due to the post-riot surge).<sup>5</sup>

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<sup>5</sup> Exhibit 7, Cassandra K. Crifasi, *et al.*, *Association between firearm laws and homicide in large, urban U.S. counties*, 95(3) *Journal of Urban Health* 383-390 (2018). As explained in my supplemental expert report, this analysis reflects revised data submitted in an erratum to the *Journal of Urban Health*. The estimated effects of the FSA/HQL law on homicide rates in Maryland's large, urban counties did not change in any significant way as a result of the revised data. Under both the original and revised data, the findings revealed an estimated 48 percent reduction in firearm homicide rates in counties other than Baltimore City and a 28 percent increase in Baltimore City. *See* Decl. Ex. 2 at 17-18.

18. I coauthored another recent study assessing the impact of the FSA, which included the HQL requirement, on the supply of handguns diverted to criminal use in Baltimore.<sup>6</sup> That study showed that the FSA with its HQL requirement was associated with a 76 percent reduction in the number of handguns originally sold in Maryland that were (1) recovered by police in connection with a crime within one year of retail sale; and (2) where the person from whom the gun was recovered was not the same as the person who purchased the gun originally. This shows a strong association between the adoption of Maryland's HQL law and a reduction in the number of handguns diverted to criminals in Baltimore.

19. This study also included data showing that a significant percentage of surveyed criminals in Baltimore believe that the FSA has made it more difficult for criminals to obtain handguns. We surveyed 195 Maryland men who were on parole or probation in May and June of 2016. This was a high-risk population evidenced by the fact that 63 percent reported that they had been shot or shot at, 48 percent had been shot or shot at multiple times. The data showed that 41 percent of these respondents reported that Maryland's new gun law had made it more difficult to obtain a gun, and 40 percent reported that the law had made it more costly to obtain a gun. Of the 172 who responded to the question with a "yes" or "no", 38 percent said the law made it more difficult to get someone to buy a gun on their behalf. These survey findings are consistent with the findings from

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<sup>6</sup> Exhibit 8, Cassandra K. Crifasi *et al.*, *The initial impact of Maryland's Firearm Safety Act of 2013 on the supply of crime guns in Baltimore*, 3(5) The Russel Sage Foundation Journal for the Social Sciences 128-140 (2017).

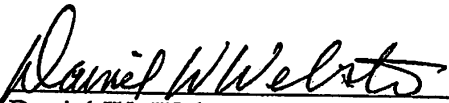
the analyses of crime gun trace data that demonstrate a dramatic decline in guns diverted into the criminal market soon after retail purchase.

20. The evidence and studies set forth in my report show that PTP laws such as Maryland's HQL requirement promote public safety by reducing the diversions of guns from criminal use and by reducing firearm homicides and suicides.

21. It is my opinion that requiring prospective purchasers of handguns to obtain permits for such purchases, such as Maryland's HQL law, is one of the most effective policies for reducing gun violence.

I declare under penalty of perjury that the foregoing is true and correct.

Date: 8-15-18

  
Daniel W. Webster



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## **Declaration Exhibit 1**

November 2017

## CURRICULUM VITAE

**Daniel William Webster**

### PERSONAL DATA

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### EDUCATION AND TRAINING

Doctor of Science, 1991, The Johns Hopkins University, School of Hygiene and Public Health, Department of Health Policy and Management.

Masters of Public Health, 1985, The University of Michigan, School of Public Health, Department of Health Planning and Administration.

Bachelors of Arts, 1982, The University of Northern Colorado, Psychology.

### PROFESSIONAL EXPERIENCE

**Bloomberg Professor of American Health, 2018 - . Professor, 2010 – present; Director, Health and Public Policy Program 2013-2015; Associate Professor, 2001-2010; Assistant Professor 1995-2001; Instructor, 1992-1995.** Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.

**Professor, 2010 – present,** Division of Public Safety Leadership, School of Education, Johns Hopkins University, Baltimore, MD.

*Research Center Participation at Johns Hopkins Bloomberg School of Public Health*  
**Center Director,** 2012 – present, **Co-Director,** 2001–2012. Johns Hopkins Center for Gun Policy and Research.

**Team Co-Lead, 2016 - .** Violence Prevention Workgroup, Bloomberg American Health Initiative.

**Deputy Dir. for Research, 2005–present, Faculty, 2000-present.** Center for the Prevention of Youth Violence.

**Core Faculty, 2016 – present.** Center for Mental Health and Substance Abuse Policy Research,

**Core Faculty, 1992 - present.** Center for Injury Research and Policy. JHBSPH.  
**Director of Violence Research, 1990-1992.** Washington Hospital Center, Trauma, Surgical Critical Care, and Emergency Medicine Department, Washington, DC.

**Graduate Research/Teaching Assistant, 1987-1990.** The Johns Hopkins University, Injury Prevention Center and Department of Pediatrics, Baltimore, MD.

**Guest Researcher, 1988.** National Institute on Aging; Epidemiology, Demography, and Biometry Program, Bethesda, MD.

**Injury Control Analyst, 1986 - 1987.** American National Red Cross, Washington, DC.

**Research Associate II, 1985 - 1986.** Program for Urban Health Research, Department of Epidemiology, School of Public Health, The University of Michigan, Ann Arbor.

**Research Associate I, 1984-1985.** Systems Analysis Division, The University of Michigan Transportation Research Institute, Ann Arbor.

**Research Assistant I, 1983-1984.** Department of Health Behavior and Health Education, School of Public Health, The University of Michigan, Ann Arbor.

**Social Worker, 1982-1983.** Department for Social Services, Cabinet for Human Resources, Commonwealth of Kentucky, Warsaw, Kentucky.

*Society Membership and Leadership*

American Public Health Association, Injury Control and Emergency Health Services Section, Policy Committee, Faculty for training seminar on Design & Evaluation of Violence Prevention Programs.

American Society of Criminology, Firearms Program Chair 2009.

*Participation on Advisory Panels and Task Forces*

Founding member and Co-Chair, advisory board for Safe Streets Baltimore, Baltimore City Health Dept., 2016 - present.

Director, Johns Hopkins-Baltimore Collaborative for Violence Reduction, 2016 – present.

Director, Baltimore Homicide Review Commission. City of Baltimore, 2014 – 2015.

Advisory Committee on Violent Media and Gun Violence to the Directorate of the Social, Behavioral and Economic Sciences Division, National Science Foundation, 2013.

Institute of Medicine, Planning Committee for Workshop on Evidentiary Base for Violence Prevention across the Lifespan and Around the World, 2012-2013.

Invited participant to the Baltimore City GunStat project to provide technical assistance to law enforcement officials on gun law enforcement strategies, 2007 to present.

Expert reviewer, Child Death Review Capacity Building Project, Harborview (University of

Washington) Injury Prevention and Research Center, 2006.

Advisory Council to the California Department of Justice for planning gun violence prevention campaign, 2005 - 2009.

Lethality Assessment Committee, advisory group for the Maryland Network Against Domestic Violence to develop a model lethality assessment protocol for police and providers of services to victims of intimate partner violence, 2003 to present.

Johns Hopkins Univ. President's Council on Urban Health, Violence Working Group, 1998-2000.

Baltimore City Task Force on Gunshot Wound Lethality, 1996-1997.

#### Grant Review

National Center for Injury Control and Prevention, Centers for Disease Control and Prevention, Youth Violence Prevention Through Community-Level Change, April 2004.

National Center for Injury Control and Prevention, Centers for Disease Control and Prevention, May 2001. (Also selected for NCIPC-CDC review panel, June 1998)

National Institutes of Health, Clinical Sciences Special Emphasis Panel, Small Business Innovation Research Program, March 1999.

National Institute for Mental Health, Behavioral Science Track Award for Rapid Transition B/START) Program, April 1998.

#### Consultations

Violence Prevention Research Program, University of California, Davis, 2014 – present. Identify state background check policies for firearm purchasers and develop plans for evaluating the laws' effects on violence and injuries.

John Jay School of Criminal Justice, 2014 – present. Advise team evaluating Cure Violence public health interventions in New York to reduce shootings and other serious violence.

Police Executive Research Forum, 2012-2014. Advise PERF and law enforcement officials in four cities on strategies to combat gun violence as part of a USDOJ Bureau of Justice Assistance project.

California Dept. of Justice, Firearms Division, 2005-2006. Provide advice about how the state should use funds from its litigation against Wal-Mart to advance gun violence prevention.

The Robert Wood Johnson Foundation, 2005-2006. Prepare advice and white papers on the prevention of youth violence and the prevention of intimate partner violence.

National Association for the Advancement of Colored People, 1999-2000. Assistance with gun violence victimization survey of NAACP members for use in lawsuit against the gun industry.

Duke University and Georgetown University, 1998-1999. Consultation on project to estimate the economic costs associated with firearm injuries.

Consortium of Virginia Urban Municipalities on strategies to reduce violence, 1992.

Center to Prevent Handgun Violence, Washington, DC, 1991-1993. Conducted survey of pediatricians on materials being developed for education families about firearm injury prevention.

Testimony

Testimony before U.S. House Gun Violence Prevention Task Force's Forum: "No More Silence: Commonsense Solutions to Address the Gun Violence Epidemic." December 8, 2015.

Congressional staff briefing on "Guns, Public Health, and Mental Illness: An Evidence-Based Approach to Federal Policy." U.S. House of Representatives, December 11, 2013.

Testimony in Support of SB 281 – Firearm Safety Act of 2013, and SB 266, Maryland Senate Judicial Proceedings Committee, February 6, 2013.

Testimony in support of HB 1092 – Public Safety – Regulated Firearms – Reporting Lost or Stolen. Maryland House of Delegates, Judicial Proceedings Committee Hearings, March 5, 2013

United States House of Representatives Democratic Gun Violence Prevention Task Force on Strengthening Federal Law on Background Checks for Firearm Purchases Friday March 15, 2013.

Proposals to Reduce Gun Violence: Protecting Our Communities While Respecting the Second Amendment. U.S. Senate, Subcommittee on the Constitution, Civil Rights, and Human Rights, February 12, 2013.

Congressional Briefing: Gun Violence: Lessons from Research and Practice. U.S. House of Representatives, February 22, 2012.

Maryland Senate. SB 512, Regulated Firearms – Database – Applications for Dealer's License – Record 2 Keeping and Reporting Requirements. February 23, 2012.

District of Columbia Council, Hearing on gun laws, January 30, 2012.

Maryland Senate and House of Delegates, SB 162 / HB 330, Bill to reduce maximum capacity of detachable ammunition magazines, Feb. – March, 2011.

Maryland Senate and House of Delegates, SB 161 / HB 1043, Bill to provide state police with greater authority to regulate licensed handgun dealers, Feb. – March, 2011.

Maryland Senate and House of Delegates, SB 239 / HB 241, Bill to create a minimum sentence of 18 months for all defendants convicted of illegal possession of a loaded firearm, Feb. – March, 2011.

Maryland Senate and House of Delegates, SB 240 / HB 252, Bill to allow longer sentences for felons illegally possessing firearms and extend prohibitions to include long guns, Feb. – March, 2011.

U.S. House of Representatives, Forum on the Gun Show Loophole Act of 2009. July 14, 2010.

Chicago City Council, Committee on Police and Fire Departments, Hearing on a new legislation to replace the city's handgun ban with comprehensive gun regulations. June 29, 2010.

Maryland Senate and House, SB 645 and HB 820, Firearms Safety Act of 2010, March 2010.

District of Columbia Council, Committee on Public Safety and the Judiciary, Hearing on a bill to rewrite many provisions of its firearms laws. October 1, 2008.

District of Columbia Council, Committee on Public Safety and the Judiciary, Hearing on the revision of the District's gun laws in response to the Supreme Court's ruling that the law was unconstitutional. July 2, 2008.

Maryland Senate, SB 642 Restrictions on pretrial release for offenses involving firearms. Mar. 2008.

Maryland Senate, SB586 Restrictions on Possession of Firearms - Conviction of Disqualifying Crime and Protective Order Respondent, March 2008.

Maryland Senate, SB585 Reporting Lost or Stolen Firearms, March 2008.

Baltimore City Council, Law to Establish a Registry for Gun Offenders, August 2007.

United States Congress, House Committee on Government Oversight and Reform, May 10, 2007.

Connecticut Senate, RB 5600, Act to Require Reporting of Theft or Loss of a Firearm. March 2004.

Maryland Senate, SB 83, Law Enforcement – Forfeited Property and Agency-Owned Handguns – Disposition; SB 528, Firearm Loss and Theft Reporting; SB 494 Assault Weapons Ban; Feb. 2003.

Maryland Senate, SB 224 Gun Accountability Act of 2002; SB 225 Gun Safety Act of 2002; SB 969 Minors Access to Firearms, March 12, 2002.

Maryland Senate, SB 448, Bodywire Evidence and Illegal Gun Sales, February 22, 2002.

Maryland Senate, SB 384, Minors' Access to Firearms - Felony. March 13, 2001.

Maryland House of Delegates, HB 1131, Mandatory Licensing of Handgun Purchasers, March 2000.  
California State Assembly, Committee on Public Safety, hearing on a right-to-carry handgun law, November 18, 1997. (Written)

Baltimore City Grand Jury Commission on the Prevention of Gun Violence, March 25, 1993.

Maryland Senate, SB 326, Assault Pistols Act of 1993, March 17, 1993.

## **EDITORIAL ACTIVITIES**

Scientific Journal Peer Review

American Journal of Epidemiology

American Journal of Preventive Medicine

American Journal of Public Health  
 Annals of Emergency Medicine  
 Annual Reviews of Public Health (Special Symposium Editor 2014-2015)  
 Archives of Pediatric and Adolescent Medicine  
 Canadian Medical Association Journal  
 Epidemiologic Reviews (Special Issue Editor 2015-2016)  
 Guide to Clinical and Preventive Services  
 Health Education and Behavior (Special Issue Editorial Board Member)  
 Health Education Research  
 Injury Prevention (Editorial Board, 2005-2010)  
 JAMA (Journal of the American Medical Association)  
 Journal of Crime and Delinquency  
 Journal of Criminal Justice  
 Journal of General and Internal Medicine  
 Journal of Health Politics, Policy, and Law  
 Journal of Interpersonal Violence  
 Journal of Policy Analysis & Management  
 Journal of Quantitative Criminology  
 Journal of Trauma  
 Journal of Urban Health  
 Journal of Women's Health  
 New England Journal of Medicine  
 Pediatrics  
 Politics and Policy  
 Preventive Medicine (Co-editor, special issue on gun violence, 2015)  
 Social Science & Medicine  
 Southern Economic Journal  
 Western Criminology Review

## **HONORS AND AWARDS**

Johns Hopkins University Distinguished Alumni Award, 2017.

Injury Free Coalition for Kids, Pioneer Award, 2017.

Leon Robertson Award for best 2016 article in *Injury Epidemiology*, co-author, 2017.

Baltimore City Health Equity Leadership Award, 2016.

David Rall Award for Science-Based Advocacy, American Public Health Association, 2015.

Finalist for The Baltimore Sun's award for Marylander of the Year, 2013.

Selected for Institute of Medicine Planning Committee for the Evidentiary Base for Violence Prevention Across the Lifespan and Around the World Workshop, 2012.

Delta Omega Honorary Society in Public Health – Alpha Chapter, Johns Hopkins Bloomberg School of Public Health, Faculty induction, 2005.

Education Award from the Maryland Network Against Domestic Violence, 2004.

Delta Omega Honorary Society - Alpha Chapter Certificate of Merit, 1989.

William Haddon Memorial Fellowship, The Johns Hopkins School of Public Health, 1988-1989.

Public Health Traineeship, The Johns Hopkins School of Public Health, 1987-1989.

## PUBLICATIONS

### Peer Reviewed Journal Articles

Crifasi CK, Merrill-Francis M, McCourt A, Vernick JS, Wintemute GJ, **Webster DW**. Association between Firearm Laws and Homicide in Large, Urban U.S. Counties. *Journal of Urban Health*, 2018 May 21. doi: 10.1007/s11524-018-0273-3. [Epub ahead of print] PMID: 29785569.

Barry CL, **Webster DW**, Stone E, Crifasi CK, Vernick JS, McGinty EE. Four Years after Newton: Public Support for Gun Violence Prevention Policies among Gun Owners and Non-Gun Owners. *American Journal of Public Health*. 2018 May 17:e1-e4. doi: 10.2105/AJPH.2018.304432. [Epub ahead of print] PMID: 29771617.

Crifasi CK, McGinty EE, Douchette M, **Webster DW**, Barry CL. Storage practices of U.S. gun owners in 2016. *American Journal of Public Health*, 2018; 108:532-537. doi: 10.2105/AJPH.2017.304262. Epub 2018 Feb 22. PMID: 29470124.

Crifasi CK, Frances M, Vernick JS, **Webster DW**. Changes in the legal environment and enforcement of firearm transfer laws in Pennsylvania and Maryland. *Injury Prevention* January 13, 2018 [Epub ahead of print] doi:10.1136/injuryprev-2017-042582. PMID: 29331990.

Zeoli AM, McCourt A, Buggs S, Lilley D, Frattaroli S, **Webster DW**. Analysis of the strength of legal firearms restrictions for perpetrators of domestic violence and their impact on intimate partner homicide. *American Journal of Epidemiology* 2017 E-pub before print November 29. <https://doi.org/10.1093/aje/kwx362> PMID: 29194475.

Kagawa RM, Rudolph KE, Cerda M, Castillo AC, Shev BA, **Webster DW**, Vernick JS, Crifasi CK, Wintemute GJ. Repeal of comprehensive background check policies and firearm homicide and suicide. *Epidemiology*, in press.

Castillo AC, Kagawa RM, **Webster DW**, Vernick JS, Cerda M, Wintemute GJ. Comprehensive Background Check Policy and Firearm Background Checks in Three States. *Injury Prevention* 2017; doi:10.1136/injuryprev-2017-042475.

**Webster DW**, Buggs SAL. Can an Efficacious Strategy for Curtailing Illegal Drug Sales Be Counted on to Reduce Violent Crime? *Criminology & Public Policy* 2017;16: 821-825.



Stuart EA, Crifasi C, McCourt A, Vernick JS, **Webster D**. Differing perspectives on analyzing data related to firearms and suicide. *American Journal of Public Health*. 2017 Aug;107(8):e26. doi: 10.2105/AJPH.2017.303890.

Crifasi CK, Choksey S, Buggs S, **Webster DW**. The initial impact of Maryland's Firearm Safety Act of 2013 on the supply of crime guns in Baltimore. *The Russel Sage Foundation Journal for the Social Sciences*, in press.

Crifasi CK, Pollack K, **Webster DW**. Assaults against U.S. law enforcement officers in the line-of-duty: Situational context and predictors of lethality. *Injury Epidemiology* 2016; 3:29. PMID: 27885587.

Tung GJ, Vernick JS, Stuart EA, **Webster DW**, Gielen AC. Federal Actions to Incentivize State Adoption of 0.08g/dl Blood Alcohol Concentration Laws. *Injury Prevention* 2016 Oct 31. doi: 10.1136/injuryprev-2016-042087. PMID: 27799290.

Milam AJ, Buggs S\*, Furr- Holden CD, Leaf P, Bradshaw CP, **Webster D**. Changes in Attitudes towards Guns and Shootings following Implementation of the Baltimore Safe Streets Intervention. *J Urban Health* 2016 Jun 13. [Epub ahead of print] PMID: 27294969.

Masho SW, Schoeny M, Sigel E, **Webster D**. Outcomes, data, and indicators of violence at the community level. *Journal of Primary Prevention* 2016;37:121-39. doi: 10.1007/s10935-016-0429-4.

Wintemute GJ, Frattaroli S, Wright MA, Claire BE, Vittes KA, **Webster DW**. Firearms and the incidence of arrest among respondents to domestic violence restraining orders. *Injury Epidemiology*, 2015; 2:14. doi: 10.1186/s40621-015-0047-2.

Riedel LE, Barry CL, McGinty EE, Bandara SN, **Webster DW**, Toone RE, Huskamp HA. Improving Health Care Linkages for Persons: The Cook County Jail Medicaid Enrollment Initiative. *J Correct Health Care*. 2016 Jul;22(3):189-99. doi: 10.1177/1078345816653199. PMID: 27302704.

Messing JT, O'Sullivan CS, **Webster D**, Campbell J. Are Abused Women's Protective Actions Associated with Reduced Threats, Stalking, and Violence Perpetrated by their Male Intimate Partners? *Violence Against Women* 2016 Apr 26. pii: 1077801216640381. [Epub ahead of print] PMID: 27118689.

Parker EM, Gielen AC, Castillo R, **Webster D**, Glass N. Intimate partner violence and patterns of safety strategy use among women seeking temporary protective orders: a latent class analysis. *Violence Against Women* 2016 Mar 6. pii: 1077801216631436. [Epub ahead of print] PMID: 26951307.

Messing JT, Campbell J, **Webster DW**, Brown S, Patchell B, Wilson JS. The Oklahoma lethality assessment study: A quasi-experimental evaluation of the Lethality Assessment Program. *Social Service Review* 2015; 89: 499-530. DOI: 10.1086/683194.

**Webster DW**, Cerdá M, Wintemute GJ, Cook PJ. Epidemiologic evidence to guide the understanding and prevention of gun violence. *Epidemiologic Reviews* 2016; 38(1):1-4. doi: 10.1093/epirev/mxv018. Epub 2016 Feb 10. PMID: 26905892.

Milam AJ, Furr-Holden CD, Leaf P, **Webster D**. Managing Conflicts in Urban Communities: Youth Attitudes Regarding Gun Violence. *J Interpersonal Violence* 2016; Mar 27. pii: 0886260516639584. [Epub ahead of print] PMID: 27021734.

Bushman BJ, Newman K, Calvert SL, Downey G, Drezde M, Gottfredson M, Jablonski NG, Masten AS, Morrill C, Neil DB, Romer D, **Webster DW**. Youth violence: what we know and what we need to know. *American Psychologist* 2016;71:17-39. doi: 10.1037/a0039687.

Wintemute GJ, Frattaroli S, Wright MA, Claire BE, Vittes KA, **Webster DW**. Firearms and the incidence of arrest among respondents to domestic violence restraining orders. *Injury Epidemiol.* 2015;2(1):14. Epub 2015 Jun 23. PMID: 27747746

Bandara SN, Huskamp HA, Riedel LE, McGinty EE, **Webster D**, Toone RE, Barry CL. Leveraging the Affordable Care Act to enroll justice-involved populations in Medicaid: an inventory of state and local efforts. *Health Affairs* 2015;34:2044-51. doi: 10.1377/hlthaff.2015.0668. PMID: 26643624.

Crifasi CK, Pollack K, **Webster DW**. The influence of state-level policy changes on the risk environment for law enforcement officers. *Injury Prevention* 2015 Dec 30. pii: injuryprev-2015-041825. doi: 10.1136/injuryprev-2015-041825. [Epub ahead of print] PMID: 26718550.

Kennedy-Hendricks A, Richey M, McGinty EE, Stuart EA, Barry CL, **Webster DW**. Opioid Overdose Deaths and Florida's Crackdown on Pain Clinics. *Am J Public Health* 2015 Dec 21:e1-e8. [Epub ahead of print] PMID: 26691121.

Rutkow L, Chang HY, Daubresse M, **Webster DW**, Stuart EA, Alexander GC. Effect of Florida's prescription drug monitoring program and pill mill laws on opioid prescribing and use. *JAMA Internal Med* 2015; online August 17, 2015. doi:10.1001/jamainternmed.2015.3931.

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**Webster DW**, Vernick JS, Eds. *Updated Evidence and Policy Developments on Reducing Gun Violence in America*. Baltimore, MD: Johns Hopkins University Press, 2014.

**Webster DW**, Vernick JS, Eds. *Reducing Gun Violence in America: Informing Policy with Evidence and Analysis*. Baltimore, MD: Johns Hopkins University Press, 2013.

Chapters contributed to in *Reducing Gun Violence in America: Informing Policy with Evidence and Analysis*. Baltimore, MD: Johns Hopkins University Press, 2013:

**Webster DW**, Vernick JS, McGinty EE, Alcorn T. "Preventing the Diversion of Guns to Criminals through Effective Firearm Sales Laws," pp. 109-122.

**Webster DW**, Vernick JS. "Spurring Responsible Firearms Sales Practices through Litigation: The Impact of New York City's Lawsuits Against Gun Dealers on Interstate Gun Trafficking," p. 123-32.

Vittes KA, **Webster DW**, Vernick JS. "Reconsidering the Adequacy of Current Conditions on Legal Firearm Ownership," pp. 65-76.

McGinty EE, **Webster DW**, Vernick JS, Barry CL. "Public Opinion on Proposals to Strengthen U.S. Gun Laws: Findings from a 2013 Survey," pp. 239-257.

Vernick JS, **Webster DW**, Vittes KA. "Law and Policy Approaches to Keeping Guns from High Risk People" in Culhane J. ed. *Reconsidering Law and Policy Debates: A Public Health Perspective*. New York: Cambridge University Press, 2011.

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**Webster DW**. Child Access Prevention (CAP) Laws. In Gregg Lee Carter (Ed.) Entry in *Encyclopedia of Guns in American Society*. Santa Barbara, CA: ABC-CLIO, 2003.

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**Webster DW**, Buggs SAL, Crifasi CK. Estimating the Effects of Law Enforcement and Public Health Interventions to Reduce Gun Violence in Baltimore. Johns Hopkins Center for Gun Policy and Research, Johns Hopkins Bloomberg School of Public Health, January 2018.

**Webster DW**, Crifasi CK, Vernick JS, McCourt A. Concealed Carry of Firearms: Facts vs. Fiction. Johns Hopkins Center for Gun Policy and Research, November 2017.

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American Psychological Association Panel of Experts Report – (alphabetical listing of contributors) Cornell D, Evans AC Jr., Guerra NG, Kinscherff R, Mankowski E, Randazzo MR, Scrivner E, Sorenson SB, Tynan WD, **Webster DW**. *Gun Violence: Prediction, Prevention and Policy*. American Psychological Association, Washington, DC, December 2013.

Consortium for Risk-Based Firearm Policy (**DW Webster** contributing member). *Guns, Public Health, and Mental Illness: An Evidence-Based Approach to State Policy*. December 2013.

Consortium for Risk-Based Firearm Policy (**DW Webster** contributing member). *Guns, Public Health, and Mental Illness: An Evidence-Based Approach to Federal Policy*. December 2013.

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**Webster DW**, Whitehill JM, Vernick JS, Parker E. *Evaluation of Baltimore's Safe Streets Program: Effects on Attitudes, Participants' Experiences, and Gun Violence*. Johns Hopkins Center for the Prevention of Youth Violence, January 2012.

**Webster DW**, Illangasekare SL. Best Practices for the Prevention Youth Homicide and Serious Violence. Johns Hopkins Urban Health Institute, October 2010.

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## **CURRICULUM VITAE**

Daniel W. Webster, Sc.D., M.P.H.

### **PART II**

#### **TEACHING**

##### *Classroom Instruction*

Instructor: Understanding and Preventing Violence, 1993- present.  
Graduate Seminar in Injury Research and Policy, 2005 – present.  
Graduate Seminar in Health and Public Policy, 2012 – 2014.  
Co-Instructor: Research and Evaluation Methods for Health Policy, 2008 – 2010.  
Lead Instructor: Research and Evaluation Methods for Health Policy, 2011-2015.

Lecturer in these JHU courses:

- Epidemiology and Evidence-Based Policy
- Public Health Policy
- Health Policy I: Social & Economic Determinants of Health
- Proposal Writing (Health Policy & Management)
- Introduction to Urban Health
- Suicide as a Public Health Problem
- Adolescence and Adolescent Health
- Issues in Injury and Violence Prevention
- Methodological Issues in Injury and Violence
- Applications in Program Monitoring and Evaluation
- Alcohol, Society, and Health
- Baltimore and “The Wire”: A Focus on Major Urban Issues
- Community Health Practicum

##### *Advising and Thesis Committees*

Primary advisor to:

- Kim Ammann Howard, PhD, 1997
- Jennifer Manganello, PhD, 1999-2003
- Allegra Kim, PhD 2001 – 2006
- April Zeoli, PhD, 2002 - 2007
- Elizabeth Saylor, PhD candidate, 2003 - 2007
- Jennifer Mendel Whitehill, PhD, 2006 – 2011
- Jillian Fry, PhD, 2007 – 2012
- James Saltzman, MPH, 2007-2008
- Gayle Nelson, MPH, 2007-2009
- Summer Venable, MPH, 2008-2010
- Jeane Garcia Davis, MPH, 2008-2011
- Donald Chalfin, MPH, 2010 – 2014
- Dara Johnson, MPH, 2011 – 2012
- Janis Sethness, MPH, 2011 – 2012
- Cassandra Kercher, PhD, 2011–2014
- Shani Buggs, PhD, 2013 –
- Christine McKenna, MPH, 2013-2014
- Alexander McCourt, PhD, 2014 -

Co-advisor to: Leonardo Goe (MHS Health Policy), 1997-98  
 Rachel Garfield (MHS Health Policy), 1998-  
 Emma (Beth) McGinty, PhD, 2010-2013

Thesis committees: Kathleen Roche, PhD in MCH, 1998  
 Shannon Frattaroli, PhD in HPM, 1998  
 Li-Hui Chen, PhD in HPM, 1999  
 Marsha Rosenberg, PhD in Mental Hygiene, 2001  
 Lisa Hepburn, PhD in HPM, 2001  
 Swapnil P. Maniar, PhD in PFHS, 2005  
 Maria Bulzacchelli, PhD in HPM, 2006  
 April Zeoli, PhD in HPM, 2007  
 Anne Outwater, PhD in Nursing, 2007  
 Donna Ansara, PhD in PFHS, 2008  
 Vanessa Kuhn, PhD in HPM, 2010  
 Susan Ganbarpour, DrPH, 2011  
 Mahua Mandel, PhD, 2012  
 Lareina La Flair, PhD, 2012  
 Gregory Tung, PhD, 2012  
 Michael Kim, PhD, 2013  
 Elizabeth Parker, PhD, 2013  
 Nicole Lunardi, MSPH, 2014

Preliminary oral exam committees: Shannon Frattaroli, Marguerite Roe, Li-Hui Chen, Mary Beth Skupien, Monique Shepard, Beth Hooten, Farfifteh Duffy, Mary Garza, Lisa Hepburn, Marc Starnes, Jennifer Manganello, Allegra Kim, Christina Pallitto, Swapnil Maniar, Christine Koth, Maria Bulzacchelli, Margaret Haynes, Frank Franklin, Donna Ansara, Vanessa Kuhn, Susan Ghanbarpour, Greg Tung, Adam, Milam, Michael Kim, Beth McGinty, Erin Pearson.

Post-Doctoral Mentoring Lorraine Freed, MD, MPH, RWJ Clinical Scholar 1996-98  
 Shannon Frattaroli, Kellogg Community Health Scholar, 1999-2000  
 Barry Solomon, MD, Pediatric Fellow, 1999-2002  
 Erica Sutton, MD, NIMH Violence Research Fellow, 2003-2005  
 Lareina LaFlair, NIDA Drug Dependency Epidemiology, 2012-2013

*Program Management / Training Program Involvement*

Program Head, PhD program in Health and Public Policy, 2006–2007; 2012 -2014.

Faculty Director, Certificate Program in Injury Control, 1999- 2012.

Executive Committee and Core Faculty, Interdisciplinary Research Training Program on Violence Research (pre- and post-doctoral training program funded by NICHD), 2008-2015.

Executive Committee and Core Faculty, Interdisciplinary Research Training Program on Violence (pre- and post-doctoral training program funded by NIMH), 1999-2008.

Core Faculty, Drug Dependency Epidemiology Program (pre- and post-doctoral training program funded by NIDA), 2011-present.

Resource Faculty, Alcohol, Injury and Violence Training Program (pre-doctoral training program funded by NIAAA), 2001-2007.

## ACADEMIC COMMITTEES

Appointments and Promotions Committee, School of Public Health, 2012 – 2015.

Conflict of Interest Committee, School of Public Health, 2011 – 2012

Academic Policy and Admissions Committee, HPM, 2006 – 2007, 2012 – 2014

Faculty Development Committee, HPM, 2010 - present

Qualifying Exam Committee, HPM, 1998- 1999, 2001 – 2008, Chair 2004 – 2008

HPM Doctoral Admissions Committee, 2006 – 2007.

Affirmative Action Committee, School, 2005 – 2010.

6 Ad Hoc Committees for Appointments and Promotions, 2006 – present.

Search Committee, Leon Robertson Chair in Injury Control, 2005 – 2006.

Academic Policy and Admissions Committee, HPM, 1997- 1999

Ad-Hoc Committee on Statistics Training, HPM, 1997-1998

Research Policy Committee, HPM, 1995-97

## RESEARCH GRANT PARTICIPATION

### Active Support

Title: Johns Hopkins-Baltimore Collaborative for Violence Reduction

Dates: 1/1/16 – 9/30/18

Principal Investigator: Daniel W. Webster

Sponsoring Agency: The Abell Foundation and The Annie E. Casey Foundation

Funding Level: \$875,000

Effort: 30%

Main Objectives: Assess police efforts to reduce violent crime and enhance training to promote more effective policing.

Title: Study of Baltimore's Underground Gun Market

Dates: 7/1/15 – 6/30/17

Principal Investigator: Daniel W. Webster

Sponsoring Agency: Everytown for Gun Safety

Funding Level: \$240,245

Effort: 15%

Main Objectives: Collect and analyze data from surveys of offenders, crime gun trace data, and gun-related arrests to describe Baltimore's underground gun market and assess evidence that 2013 state gun laws affected the diversion of guns to criminals.

Title: Effects of Universal Background Check Laws for Handgun Sales in Maryland and Pennsylvania  
Dates: 8/1/15 – 7/31/18  
Principal Investigator: Daniel W. Webster  
Sponsoring Agency: The Joyce Foundation  
Funding Level: \$357,000  
Effort: 18%  
Main Objectives: Describe the implementation and enforcement of universal background check laws for handgun purchases in Maryland and Pennsylvania and estimate the effects of the laws and enforcement practices on gun violence.

Title: Estimating Effects of Gun Policies on Intimate Partner Homicides  
Dates: 8/1/15 – 6/30/17  
Principal Investigator: Daniel W. Webster, subcontract to Michigan State University  
Sponsoring Agency: The Joyce Foundation  
Funding Level: \$267,276  
Effort: 10%  
Main Objectives: To estimate the impact of firearm sales laws on intimate partner homicides and examine factors relevant to successful enforcement of those laws.

Title: Promoting Evidence-based Policies to Reduce Domestic Violence Involving Guns  
Dates: 7/1/15 – 6/30/16  
Principal Investigator: Daniel W. Webster  
Sponsoring Agency: Norman Raab Foundation  
Funding Level: \$25,000  
Effort: 2%

Title: Analysis of the Strength of Legal Firearms Restrictions for Perpetrators of Domestic Violence and their Impact on Intimate Partner Homicide  
Dates: 8/1/15 – 1/31/18  
Principal Investigator: Daniel W. Webster  
Sponsoring Agency: The Joyce Foundation  
Funding Level: \$176,389  
Effort: 10%  
Main Objectives: Describe the implementation and enforcement of domestic violence related firearm laws and their impact on intimate partner homicides.

Title: Baltimore Homicide Review Commission  
Dates: 9/1/14 – 12/31/15  
Principal Investigator: Daniel W. Webster  
Sponsoring Agency: Baltimore City Mayor's Office  
Funding Level: \$135,000  
Effort: 15%  
Main Objectives: Conduct in-depth reviews of homicides in three police districts in Baltimore to identify determinants of lethal violence and develop recommendations for policies, procedures, and programs to prevent homicides.



Title: Study of Baltimore's Underground Gun Market  
 Dates: 7/1/14 – 6/30/15  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: The Norman Raab Foundation  
 Funding Level: \$50,000  
 Effort: 5%  
 Main Objectives: Gather data about how criminals access firearms, how they connect with suppliers, what barriers they face, and their perceptions of gun laws.

Title: Effects of Drug and Gun Law Enforcement on Violence in Baltimore  
 Dates: 1/1/14 – 12/31/15  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: The Abell Foundation  
 Funding Level: \$144,918  
 Effort: 15%  
 Main Objectives: Estimate the effects of law enforcement activities directed at drug and gun law violations on violent crime in Baltimore from 1986 through 2012.

Title: Gun Owners Perspectives on Safe Gun Ownership and Sales Practices  
 Dates: 10/01/2013 – 03/31/16  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: Harold B. Simmons Foundation  
 Funding Level: \$411,421  
 Effort: 20%  
 Main Objectives: Study gun owners' attitudes relevant to safe firearm sales and storage.

Title: Johns Hopkins Center for the Prevention of Youth Violence  
 Dates: 9/15/11 – 9/14/16  
 Principal Investigator: Philip Leaf  
 Sponsoring Agency: Centers for Disease Control and Prevention  
 Funding Level: \$6 million  
 Main Objectives: Develop, implement, and evaluate a comprehensive community intervention to prevent youth violence in the Park Heights neighborhood of Baltimore.  
 Effort: 20% to 25%

#### Prior Support

Title: Prescription Opioid Addiction Research Study  
 Dates: 09/01/2012 – 08/31/2014  
 Principal Investigator: Colleen L. Barry  
 Sponsoring Agency: AIG  
 Funding Level: \$430,655  
 Main Objectives: To assess of the growing problem of prescription opioid addiction, and to identify promising policy and clinical approaches to address the problem.  
 Effort: 10%

Title: National Gun Violence Research Center - subcontract  
 Dates: 05/01/13 – 05/31/14  
 Principal Investigator: Daniel W. Webster



Sponsoring Agency: Police Executive Research Forum  
 Funding Level: \$41,762  
 Effort: 20%  
 Main Objectives: Assist PERF with designing and conducting studies of innovative policing strategies to combat gun violence.

Title: Evaluation of the Effects of Permit to Purchase Handgun Laws  
 Dates: 9/1/12 - 8/31/14  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: The Joyce Foundation  
 Funding Level: \$222,242  
 Main Objectives: To evaluate the effects of changes in permit to purchase handgun laws in Connecticut and Missouri on homicides and the diversion of guns to criminals.  
 Effort: 25%

Title: Gun Violence Reduction Program  
 Dates: 1/01/11 – 12/31/13  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: Bloomberg Philanthropies  
 Funding Level: \$500,000  
 Main Objectives: Conduct research, policy analysis, and technical assistance to inform efforts to reduce the availability of illegal guns and gun violence.  
 Effort: 5% to 40%

Title: Evaluation of Baltimore Policing Strategies to Reduce Gun Violence  
 Dates: 10/1/2010 – 3/31/2012.  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: U.S. Dept. of Justice, Bureau of Justice Assistance  
 Funding Level: \$60,000  
 Main Objectives: Develop unbiased estimates of the impact of 3 strategies being implemented by Baltimore police to reduce violence.  
 Effort: 15%

Title: Impact of Safe Streets' Outreach Workers on the Lives of Their Clients  
 Dates: 12/1/09 – 6/30/10  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: Baltimore City Health Department  
 Funding Level: \$72,000  
 Main Objectives: Measure the impact of the Safe Streets program on program participants and analyze of the relationships between program activities and gun violence.  
 Effort: 25%

Title: Effects of the Lethality Assessment Program on Intimate Partner Violence  
 Dates: 3/15/10 – 3/14/12  
 Principal Investigator: Daniel Webster  
 Sponsoring Agency: Centers for Disease Control and Prevention (through Center grant to JHU)  
 Funding Level: \$388,282  
 Main Objectives: Estimate the effects of the Maryland Lethality Assessment program on

intimate partner homicide and repeat intimate partner violence.  
 Effort: 20%

Title: Gun Violence Reduction Program  
 Dates: 1/01/08 – 12/31/10  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: Anonymous donor  
 Funding Level: \$500,000

Main Objectives: Conduct research, policy analysis, and technical assistance to inform efforts to reduce the availability of illegal guns and gun violence.  
 Effort: 25%

Title: Analyzing and Developing Policies to Limit Firearm Access by High-Risk People  
 Dates: 5/1/09 – 4/30/11  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: The Joyce Foundation  
 Funding Level: \$179,971  
 Main Objectives: Research and describe state laws pertaining the potential public safety gains for expanding current prohibition categories for firearm purchase and possession.

Title: Data for Combating Illegal Guns  
 Dates: 1/01/08 – 12/31/08  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: Maryland Governor's Office for Crime Control and Prevention  
 Funding Level: \$75,419  
 Main Objectives: Assist Baltimore and Maryland State Police to collect and analyze data on crime guns and illegal gun trafficking.

Title: Analyzing & Assisting Innovative City-Level Efforts to Prevent Gun Violence  
 Dates: 5/1/07 – 4/30/09  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: The Joyce Foundation  
 Funding Level: \$175,000  
 Main Objectives: Analyze data on illegal gun trafficking and provide consultation to enhance data to inform efforts to stem gun trafficking in Milwaukee. Case study of Chicago Police Department's efforts to thwart gun trafficking.

Title: Evaluation of the California Firearms Domestic Violence Intervention Project  
 Dates: 1/15/07 – 1/14/10  
 Principal Investigator: Garen Wintemute (UC Davis) and Shannon Frattaroli (JHBSPH)  
 Sponsoring Agency: California Department of Justice  
 Funding Level: \$31,481 subcontract from UC Davis for first year  
 Main Objectives: Evaluate a program in 2 California counties to enhance implementation of state laws prohibiting certain domestic violence offenders from possessing firearms.  
 Effort: 10%

Title: Baseline Data for Evaluating a Community Initiative to Reduce Youth Homicides  
 Dates: 3/01/07 – 2/28/09  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: Baltimore City Health Department  
 Funding Level: \$75,122  
 Main Objectives: Collect and analyze baseline data on violent crime and youths' attitudes relevant to gun violence in intervention and comparison neighborhoods.  
 Effort: 6%

Title: Evaluation of a community gun violence prevention initiative in Baltimore.  
 Dates: 9/1/05 – 8/31/10  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: Centers for Disease Control and Prevention  
 Funding Level: \$745,352  
 Main Objectives: Estimate the impact of the initiative on youth gun violence victimization and perpetration and attitudes and behaviors of high risk youth.  
 Effort: 25%-30%

Title: Effects of a Formal Danger Assessment and Risk Communication Intervention on Actions Taken to Reduce Risks of Intimate Partner Violence  
 Dates: 9/1/04 – 8/31/09  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: Centers for Disease Control and Prevention  
 Funding Level: \$485,000  
 Main Objectives: Determine whether a formal, quantitative assessment of danger, and a standard protocol for communicating the assessed risk of future partner violence and scientific support for protection strategies is more effective than current procedures in motivating protective actions and lowers risk for future violence.  
 Effort: 20%-25%

Title: Reducing Illegal Gun Trafficking Through Research and Technical Assistance  
 Dates: 5/1/05 – 4/30/08  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: The Joyce Foundation  
 Funding Level: \$181,117  
 Main Objective: Disseminate research findings to law enforcement agencies, advocates, and the media on policies shown to reduce illegal gun trafficking.  
 Effort: 25%-30%

Title: Effects of Police Stings of Gun Dealers on the Illegal Gun Market  
 Dates: 11/1/03 - 10/31/04  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: The Overbrook Foundation  
 Funding Level: \$37,000  
 Main Objectives: Assess the impact of police stings of 12 gun dealers suspected of making illegal gun sales in Chicago on the flow of new guns into the illicit gun market.  
 Effort: 20%

Title: Evaluating and Developing Policies to Regulate Licensed Gun Dealers  
 Dates: 4/1/02 - 3/31/04  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: The John D. and Catherine T. MacArthur Foundation  
 Funding Level: \$260,000  
 Main Objectives: 1) Document state policies and practices for regulation and oversight of licensed gun dealers; 2) Assess effects of those measures on gun trafficking; and 3) Recommend strategies for deterring diversions of guns to criminals.  
 Effort: 35%

Title: Working with Health Commissioners to Reduce Gun Violence  
 Dates: 7/01/03 - 6/30/04  
 Principal Investigator: Jon S. Vernick  
 Sponsoring Agency: Richard and Rhoda Goldman Fund  
 Funding Level: \$100,000  
 Main Objective: Identify and provide technical assistance to city or county health commissioners in order to use public health powers to shut down corrupt gun dealers who endanger the public's health.  
 Effort: 15%

Title: Separating Kids from Guns Program  
 Dates: 10/01/01 - 9/30/03  
 Principal Investigator: Shannon Frattaroli  
 Co-PI: Daniel W. Webster  
 Sponsoring Agency: The David and Lucille Packard Foundation  
 Funding Level: \$300,000  
 Main Objective: Conduct research, perform policy analysis, disseminate information relevant to protecting children and adolescents from unsupervised access to guns.  
 Effort: 25%

Title: Johns Hopkins Center for Gun Policy and Research  
 Dates: 01/01/99 - 4/30/04  
 Sponsoring Agency: The Joyce Foundation  
 Principal Investigator: Stephen P. Teret (1995-2001), Jon S. Vernick (2001-present)  
 Co-Prin. Invest.: Daniel W. Webster (2001-present)  
 Funding Level: 2001-2003: \$600,000  
 Main Objective: Develop and analyze policies to reduce firearm injuries.  
 Responsibilities: Co-direct Center, initiate and conduct research and analysis relevant to gun policy; develop and analyze gun policy surveys; assist groups working to reduce gun violence; serve as resource to media and policymakers.  
 Effort: 15% (05/01/03 - 4/30/04)  
 35% (05/01/01 - 4/30/03)  
 25% (01/01/00 - 4/30/01)  
 35% (01/01/96 - 12/31/99)  
 20% (01/01/95 - 12/31/96)

Title: Effects of Minimum Age Restrictions on Handgun Purchase and Possession – Center for the Prevention of Youth Violence  
 Dates: 10/01/00 - 9/30/05  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: Centers for Disease Control and Prevention  
 Funding Level: \$306,695  
 Main Objective: Estimate the effects of minimum age restrictions on handgun purchases and possession on youth homicide offending and suicides

Title: Evaluation of Instruments to Assess Risk for Intimate Partner Violence  
 Dates: 08/01/00 - 03/31/04  
 Principal Investigator: Jacquelyn C. Campbell  
 Sponsoring Agency: National Institute of Justice  
 Funding Level: \$619,792  
 Main Objective: Determine the sensitivity, specificity, and predictive value of four instruments designed to assess future risk for violent victimization by an intimate partner.  
 Effort: 20%

Title: The Center for Injury Research and Policy:  
 Dates: 1987-2005  
 Sponsoring Agency: Centers for Disease Control and Prevention  
 Principal Investigator: Ellen MacKenzie  
 Funding Level: 1999-2003: \$750,000 per year.  
 Main Objective: One of the eight regional injury control research centers.  
 Responsibilities: Evaluate state-level gun policies, direct study of risk factors for serious injuries from intimate partner assaults, develop research proposals, serve as resource to students, media, practitioners, and policy makers.  
 Effort: 10% (09/03/03 - 8/31/04) 20% (04/01/94 - 08/31/94)  
 10% (09/01/00 - 8/31/01) 50% (07/01/92 - 03/31/94)  
 20% (09/01/99 - 8/31/00) 100% (04/01/92 - 06/30/93)  
 25% (09/01/94 - 08/31/98) 10% (09/01/98 - 08/31/99)

Title: Developing and Analyzing Data for Effective Gun Law Enforcement  
 Dates: 03/01/01 - 02/28/02  
 Principal Investigator: Daniel W. Webster  
 Sponsoring Agency: Governor's Office of Crime Control and Prevention  
 Funding Level: \$102,911  
 Main Objective: Develop databases for information about the sources of crime guns and the prosecution of gun crimes  
 Effort: 35%

Title: Developing a Dataset of State Gun Laws  
 Dates: 12/01/00 - 11/30/01  
 Principal Investigator: Jon S. Vernick  
 Sponsoring Agency: Annie E. Casey Foundation  
 Funding Level: \$45,000  
 Main Objective: Determine the presence and effective dates of specific types of gun laws in each of the 50 U.S. states and the District of Columbia. Create a dataset with

Effort: this information and provide the information to interested researchers.  
10%

Title: Effects of Personalized Guns in Maryland  
Dates: 9/1/99 - 8/31/00  
Sponsoring Agency: The Abell Foundation  
Funding Level: \$40,533  
Principal Investigator: Stephen Teret  
Main Objective: Assess likely effects of a law to require personalized guns in Maryland  
Effort: 10%

Title: Risk Factors for Homicide in Violent Intimate Relationships  
Dates: 09/01/96 - 02/28/00  
Sponsoring Agency: NIDA, NIMH, CDC, NIJ, NIA  
Principal Investigator: Jacquelyn Campbell  
Funding Level: \$1,267,744  
Main Objective: Determine risk factors for homicide or attempted homicide among women involved in violent intimate relationships and develop predictive screening devices for clinicians, shelter workers, and the courts.  
Effort: 10% (09/01/99 - 02/28/00)  
25% (09/01/98 - 08/31/99)  
10% (09/01/97 - 08/31/98)  
15% (09/01/96 - 08/31/97)

Title: Preventing Firearm Suicide and Unintentional Deaths Through Safer Gun Design  
Dates: 01/01/00 - 12/31/00  
Principal Investigator: Jon S. Vernick  
Sponsoring Agency: Funders' Collaborative for Gun Violence Prevention  
Funding Level: \$176,755  
Main Objective: Evaluate potential benefits of safer gun designs  
Effort: 10%

Title: Public Attitudes About New Law Enforcement Technologies  
Dates: 06/01/97 – 05/31/99  
Sponsoring Agency: National Institute of Justice  
Principal Investigator: Daniel W. Webster  
Funding Level: \$266,625  
Main Objectives: Assess public attitudes relevant to law enforcement strategies to detect concealed weapons in high-crime areas including the use of new technology, concerns about safety, privacy, and fairness in the way that law enforcement officials apply new technology. Qualitative study of residents of a high-crime neighborhood in Baltimore and a national phone survey of urban residents.

Title: Evaluation of the California Violence Prevention Initiative  
Dates: 07/01/93 - 04/15/96  
Sponsoring Agency: The California Wellness Foundation

Principal Investigator: Stephen P. Teret  
 Co-Prin. Investigator: Daniel W. Webster  
 Funding Level: \$3.1 million  
 Main Objectives: Conduct process and outcome evaluation of a statewide violence prevention initiative.  
 Effort: 50%

Title: Evaluation of Violence Prevention Public Education Campaign  
 Dates: 04/01/94 - 03/31/95  
 Sponsoring Agency: The California Wellness Foundation  
 Principal Investigator: Daniel W. Webster  
 Funding Level: \$40,000  
 Main Objectives: The describe all facets of the campaign and the political and social context in which the campaign is conducted and evaluate the effects of the campaign on public opinion, opinion leaders, the media, and policy makers.  
 Effort: 20%

Title: Planning "The Consortium on Gun Policy and Information"  
 Dates: 04/01/94 - 10/31/94  
 Sponsoring Agency: The Joyce Foundation  
 Principal Investigator: Stephen P. Teret  
 Funding Level: \$40,000  
 Main Objectives: To assess the need for a "Consortium on Gun Policy and Information" that would provide factual information on firearms and the public's health to various consumers. Examine the feasibility of creating a Consortium, explore the policy role that such an organization might fulfill, and describe the methods by which accurate information could be disseminated.  
 Effort: 10%

## PRESENTATIONS

### *Scientific Meetings*

**Webster DW.** Research and public safety collaborations focused on reducing gun violence in Baltimore. Presented at the Annual meeting of the American Society of Criminology, New Orleans, November 2016.

**Webster DW.** What have we learned about the impact of states' gun policies. Plenary session presentation at the annual meeting of the American Public Health Association, Denver, Nov. 2016.

**Webster DW, Crifasi CK, Meyers JS, Vernick JS.** Effects of changes in permit-to-purchase handgun laws on suicide rates. Presented at the Annual Meeting of the American College of Epidemiology, Atlanta, GA, September 29, 2015.

**Webster DW, Meyers JS, Buggs S.** Access to firearms among youth in the United States: Patterns, consequences, and prevention strategies. Presented at the Institute of Medicine's Forum on Global Violence Prevention, Workshop on Lethal Means of Violence, Washington, DC, December 18, 2014.



**Webster DW.** State of the science and need for additional research to prevent gun violence in America. Presentation at the Martha May Elliott Forum at the American Public Health Association Annual Meetings, New Orleans, November 2014.

**Webster DW.** Community Involvement in the Evaluation of Baltimore's Safe Streets Program to Reduce Youth Violence. Presented at the annual meetings of the Society for Prevention Research, Washington, DC May 29, 2014.

**Webster DW.** Mental health and means of violence. Presented at Workshop on Violence and Mental Health: Opportunities for Prevention and Early Intervention, Institute of Medicine's Forum on Global Violence Prevention, February 26, 2014.

**Webster DW.** Effects of Missouri's permit to purchase handgun licensing law on the diversion of firearms to criminals and homicides. Presented at the annual meetings of the American Public Health Association, Boston, November 2013.

Vittes KA, **Webster DW**, Vernick JS. Associations between state gun sales laws and the source of criminals' handguns they used to commit crime. Presented at the annual meetings of the American Public Health Association, Boston, November 2013.

**Webster DW.** Effects of Baltimore's Safe Streets Program on Gun Violence and Youth Attitudes toward Resolving Conflicts with Guns. Presented at the World Health Summit, Berlin, Germany, October 2013.

**Webster DW.** Safe Streets Baltimore – program effects on gun violence, youth attitudes, and the lives of program participants. Presented at the meetings of the Society for the Advancement of Violence and Injury Research, Baltimore, June 2013.

Parker EM, Gielen AC, Castillo R, **Webster DW.** Intimate Partner Violence and Patterns of Safety Strategy Use among Women Seeking Temporary Protective Orders: A Latent Class Analysis. Presented at the meetings of the Society for the Advancement of Violence and Injury Research, Baltimore, June 2013.

**Webster DW.** Priorities for public health efforts to reduce gun violence. Presentation to the Institute of Medicine's Workshop on Priorities for Public Health Research Agenda to Reduce Firearm-Related Violence, Washington, DC, April 2, 2013

**Webster DW.** State gun laws' effects on the intra- and interstate diversion of guns used by criminals. Presented at the annual meetings of the American Society of Criminology, Washington, DC, November 2011.

**Webster DW.** Effects of state gun sales laws on the exportation of guns used by criminals. Presented at the annual meetings of the American Public Health Association Meetings, Washington, DC, November 2011.

**Webster DW**, Mendel JS, Vernick. Evaluating Baltimore's Safe Streets Program's effects on violence. Presented at the annual meetings of the Amer. Public Health Assoc., Denver, Nov. 2010.



**Webster DW**, Vernick JS, Mendel JS. Interim evaluation of Baltimore's Safe Streets initiative: Effects on gun violence. Presented at the Annual Meetings of the American Public Health Association, Philadelphia, November 2009.

**Webster DW**. Impact of danger assessment screening and safety education on abused women's perceived risk of serious re-abuse. Presented at the Annual Meetings of the American Public Health Association, Philadelphia, November 2009.

Mendel JS, **Webster DW**, Vernick JS. Street outreach to prevent gun violence in Baltimore: An analysis of high-risk conflict mediation. Presented at the Annual Meetings of the American Public Health Association, Philadelphia, November 2009.

Vernick JS, **Webster DW**. An environmental approach to preventing firearm violence: targeting illegal gun trafficking. Annual Meetings of Amer. Public Health Assoc., Philadelphia, Nov. 2009.

Vittes KA, **Webster DW**. Potential effects of expanding firearm prohibitions in the U.S.: analysis of data from a national survey of prisoners. Presented at the Annual Meetings of the American Public Health Association, Philadelphia, November 2009.

**Webster DW**, Vernick JS, Bulzacchelli MT. Effects of Policies to Promote Firearm Dealer and Owner Accountability on Firearm Trafficking. Presented at the Annual Meeting of the American Public Health Association, Washington, DC, November 2007.

**Webster DW**. Firearm violence roundtable: Data collection, data quality, and data access. Roundtable discussion led at the Annual Meeting of the American Public Health Association, Washington, DC, November 2007.

**Webster DW**, Vernick JS. Implementation of a Community Gun Violence Prevention Program: A Focus on Outreach Workers' Efforts. Presented at the Annual Meeting of the American Public Health Association, Washington, DC, November 2007.

**Webster DW**, Mahoney P, Campbell JC, Ghanbarpou S, Stockman J. Factors associated with seeking a long term protective order and staying away among women seeking temporary protective orders against a male partner. Presented at the Annual Meeting of the American Public Health Association, Washington, DC, November 2007.

**Webster DW**, Mahoney P, Campbell JC, Ghanbarpou S. Communicating empirically-based information about risks and protection strategies to survivors of intimate partner violence. Presented at the Annual Meeting of the American Public Health Association, Washington, DC, Nov. 2007.

**Webster DW**, Vernick JS, Bulzacchelli MT. Association Between Regulations and Oversight of Firearm Dealers and Gun Trafficking. Presented at the Annual Meeting of the American Society of Criminology, Atlanta, November 2007.

Campbell JC, O'Sullivan C, Roehl J, **Webster DW**, Mahoney P, White M, Eliacin J, Guertin K. What battered women know and do to protect themselves from abuse: results and methodological challenges from the domestic violence risk assessment validation experiment. Paper presented at the 9<sup>th</sup> International Family Violence Research Conference, Portsmouth, NH, July 2005.

**Webster DW**, Vernick JS, Manganello JA, Zeoli AM. Effects of youth-focused firearm laws on youth suicides. Paper presented at the annual meeting of the American Public Health Association, Washington, DC, November 2004.

Vernick JS, **Webster DW**, Pierce MW, Johnson SB, Frattaroli S. Judging the constitutionality of injury interventions using empirical data: The case of concealed weapons detectors. Paper presented at the annual meeting of the American Public Health Association, Washington, DC, November 2004.

Vernick JS, Lewin NL, Beilenson PL, Mair JS, Lindamood MM, Teret SP, **Webster DW**. Using local public health powers as a tool for gun violence prevention: The Baltimore Youth Ammunition Initiative. Paper to be presented at the annual meeting of the American Public Health Association, Washington, DC, November 2004.

**Webster DW**. Cracking down on corrupt gun dealers in Chicago: Effects on the illicit gun market. Paper presented at the annual meeting of the American Public Health Association, San Francisco, November 2003.

Campbell JC, **Webster DW**, Mahoney P, Rhoel J, O'Sullivan C. Domestic violence risk assessment and history of injury. Presented at the Annual Meeting of the American Public Health Association, San Francisco, November 2003.

Kim A, **Webster DW**. Effects of a one-gun-a-month purchase limit on illicit gun trafficking and availability. Presented at the Annual Meeting of the American Public Health Association, San Francisco, November 2003.

Campbell JC, **Webster DW**, Chouaf K, et al. "If I can't have you, no one can": Further exploration of estrangement increasing risk of intimate partner femicide. Presented at the Annual Meetings of the American Society of Criminology, Chicago, November 2002.

Kim A, **Webster DW**. The effects of the 1996 Maryland Gun Violence Prevention Act on Illicit Gun Markets. Presented at the Annual Meeting of Amer. Public Health Assoc., Philadelphia, Nov. 2002.

**Webster DW**, Vernick JS, Hepburn L. The association between licensing, registration, and other gun sales laws and the state-of-origin of crime guns. Presented at the National Association for Injury Control Research Centers meeting, Pittsburgh, May 2001.

**Webster DW**, Vernick JS, Hepburn L. The association between licensing, registration, and other complementary gun sales laws and the state-of-origin of crime guns. Presented at the annual meetings of the American Public Health Association, Boston, November 2000.

Campbell JC, **Webster DW**, et al. Risk factors for intimate partner femicide among women in physically abusive relationships. Presented at the annual meetings of the American Public Health Association, Boston, November 2000.

**Webster DW**, Vernick JS, Hepburn L. Can comprehensive gun control and enforcement keep guns from being used in crime? Presented at the annual meetings of the American Society of Criminology, Toronto, Ont., November 1999.

Roche K, **Webster DW**, Alexander C, Ensminger M. Neighborhood effects on the association between parenting and youth fighting. Presented at the American Sociological Association Annual Meetings, 1999.

**Webster DW**. Assessing sources of data on risk factors for intimate partner homicide: Proxy respondent surveys versus police records. Femicide Research Working Meeting, Chapel Hill NC, February 1999.

**Webster DW**, Campbell JC, Curry MA. Issues of using proxy informants in femicide research. Annual meetings of the American Society of Criminology, Washington DC, November 1998.

McFarlane J, **Webster DW**, Campbell JC, Block CR, Ulrich Y. Femicide with and without suicide by an intimate partner: A comparative analysis. Annual meetings of the American Society of Criminology, Washington DC, November 1998.

**Webster DW**, Vernick JS, Huang K. The effects of Maryland's law banning Saturday Night Specials on homicides. American Public Health Assoc. Annual Meeting, Washington DC, Nov. 1998. Vernick JS, **Webster DW**, Huang K. Maryland's 1988 law banning Saturday Night Special handguns: Effects on intermediate outcomes. American Public Health Association Annual Meeting, Washington DC, November 1998.

**Webster DW**. Investigating a sudden increase in the lethality of shootings in Baltimore: A case study. American Public Health Association Annual Meeting, Indianapolis IN, November 1997.

Freed LH, Wilson MHS, Longwell JJ, Carrese J, **Webster DW**. Deterrent to gun carrying among incarcerated adolescent males. Presented at the Annual Meeting of the Robert Wood Johnson Clinical Scholars Meeting, November 1998.

**Webster DW**, Kaljee L, Vernick JS, Cameron DD. Attitudes about new law enforcement technologies and strategies for detecting concealed weapons in a high-crime urban community. Presented at the National Institute of Justice Annual Research and Evaluation Meetings, Washington DC, July 1998.

**Webster DW**, Campbell JC. Issues in using case-control methods in homicide research. Annual Meetings of the American Society of Criminology, San Diego CA, November 1997.

**Webster DW**. Methodological challenges to evaluating the Brady Law. Annual Meetings of the Homicide Research Working Group, Shepherdstown, WV, June 9 1997.

**Webster DW**. Modifying guns to reduce child and adolescent mortality: A Risk Analysis. American Public Health Association Annual Meeting, New York, November 1996.

**Webster DW**. School-based efforts to reduce adolescent violence. Presented at Children Harmed and Harmful: Risks and Risk-Taking Among 10-15 Year-Olds, Working Conference. Chicago, September 1994.

**Webster DW**. Tackling the problem of gun carrying among youth: Behavior change vs. environmental change. Paper presented at the National Conference on Risk-Taking Behaviors Among Children and Adolescents. Arlington, VA, June 1994.

**Webster DW.** Individual vs. community perspective on the study and prevention of youth weapon carrying. Public Health Service Annual Professional Meetings, Baltimore, MD, April 1994.

**Webster DW, Wilson MEH.** The role of primary care pediatricians in preventing firearm injuries to children and youth. Johnson & Johnson Pediatric Institute Conference on the Pediatrician's Role in Violence Prevention, Dulles, VA, March 1994.

**Webster DW, Gainer PS, Champion HR.** Determinants of weapon carrying within a sample of inner city junior high school students. Paper to be presented at the American Public Health Association Annual Meetings, Washington, DC, November 1992.

**Webster DW.** Short-term effects of a primary prevention program for youth violence. American Psychiatric Association Annual Meetings, Washington, DC, May 1992.

**Webster DW, Sykes L, Champion HR, Gainer PS.** The effects of Washington D.C.'s epidemic of gun violence on trauma center admissions and wound profiles. American Public Health Association Annual Meetings, Atlanta, GA, November 1991.

Champion HR, Oschner MG, **Webster DW.** A retrospective review of over 300 abdominal gunshot wounds at an urban Level I trauma center. International Society of Surgery Conference, Stockholm, Sweden, August 1991.

Wilson MEH, **Webster DW, Duggan AK, Pakula LC.** Firearm injury prevention counseling: are pediatricians and parents ready? American College of Physicians Annual Meetings, April 1991.

**Webster DW, Wilson MEH, Duggan AK.** Parental beliefs and practices concerning firearm injury prevention. American Public Health Association Annual Meetings, New York, October 1990.

**Webster DW, Wilson MH, Duggan AK.** Determinants of pediatrician firearm injury prevention counseling practices. American Public Health Assoc. Annual Meetings, New York, October 1990.

**Webster DW, Wilson MH, Duggan AK.** Pediatrician attitudes and practices concerning firearm injury prevention counseling. Amer. Pediatric Soc./Soc. Pediatric Research Meetings, Chicago, 1990.

Waller AE, **Webster DW, Baker SP.** Homicide and suicide among children, United States, 1980-1985. American Public Health Association Annual Meeting, Chicago, October 1989.

Keyl PM, **Webster DW, Smith GS, Baker SP.** The effect of Maryland's seat belt law on fatality risks. SAE Conference on the Evaluation of Trends in Auto Safety, National Highway Traffic Safety Administration, Washington, DC, May 1989.

*Invited Presentations / Seminars / Webinars*

A Roadmap for Reducing Gun Violence in America. 28th Annual Herbert Lourie Memorial Lecture on Health Policy, Maxwell School of Citizenship and Public Affairs, Syracuse University, Oct. 2016.

Gun Violence in America: How Culture and Politics Shape Our Response. Public Health Models for Reducing Gun Violence. 22nd Annual Rosemary Flanigan Lecture, Center for Practical Bioethics, KU School of Medicine, The University of Kansas, August 2016.

Lessons from Baltimore's Safe Streets Program on Community Efforts to Reduce Gun Violence. National Academies of Science, Engineering, and Medicine Workshop on Community Violence Prevention. Brooklyn, NY, June 16, 2016.

Effects of Extending Background Check Requirements to Firearm Sales by Private Gun Owners. White House meeting for state and local officials on strategies to reduce gun violence. Washington, DC, May 24, 2016.

Priorities for Advancing Research on Gun Violence. American Association for the Advancement of Science Forum on Science and Technology Policy, Washington, DC, April, 2016.

Evidence to Guide Public Health Efforts to Reduce Gun Violence. Keynote presentation at Gun Violence: A Public Health Crisis Symposium, Washington University of St. Louis, April 5, 2016.

Effects of drug law enforcement practices on gun violence in Baltimore, 2003-2015. Presentation at 2016 National High-Intensity Drug Trafficking Areas Conference, Washington, DC, Feb. 18, 2016.

Public health approaches to reducing gun violence in America. Presentation at Moving from Crisis to Action: A Public Health Approach to Reducing Gun Violence, Mother Emanuel A.M.E. Church, Charleston, SC, Dec. 4, 2015.

Evidence on policies to keep guns from high-risk individuals. The Brady Center for Gun Violence Prevention and the American Public Health Association's Summit. Washington, DC, Oct. 27, 2015.

Charting a Course Toward Fewer Gun Deaths in America. National Public Health Week Grand Rounds Lecture, Drexel University, School of Public Health, Philadelphia, April 8, 2015.

Evidence to Guide Gun Violence Prevention in America. National Public Health Week Grand Rounds, University of Delaware, Newark, DE, April 6, 2015

Research on Policies to Keep Firearms from Dangerous People. Forum on Gun Violence Prevention. American Public Health Association and Brady Campaign to Prevent Gun Violence. Washington, DC, March 2, 2015.

Why Collective Efficacy Makes us Safer than "Good Guys with Guns." Q Commons Baltimore. Baltimore. February 26, 2015.

Evidence that State Gun Policies Can Reduce Gun Availability to Criminals and Gun Violence. Gun Violence Prevention Summit for State Legislators, Arlington, VA, December 9, 2014.

Opportunities and Challenges for Prosecutors Combatting Gun Violence in America. Keynote presentation to the first meeting of Prosecutors Against Gun Violence, Atlanta, Oct. 21, 2014.

Evidence-Based Strategies to Reduce Gun Violence in America. Presentation as part of the Distinguished Guest Faculty Seminars, University of Michigan Injury Research Center, Ann Arbor, Oct. 21, 2014.

Evidence-Based Strategies for Reducing Gun-Related Violence and Injuries Among Youth. Grand Rounds Presentation, Department of Pediatrics and Adolescent Medicine, Johns Hopkins University, School of Medicine. Sept. 24, 2014.

America's Path to Fewer Gun Deaths. Presented at TEDMED Conference, Washington, DC, Sept. 10, 2014.

Evidence-Based Policies to Reduce Gun Violence in America. George Mason University, Center for Evidence-Based Crime Policy's 2014 Symposium, June 23, 2014.

Using Research Evidence to Strengthen Maryland's Gun Laws. Mid-Atlantic Public Health Grand Rounds, Johns Hopkins Bloomberg School of Public Health, June 18, 2014.

Evidence to Support Efforts to Reform America's Gun Laws. The Brady Campaign Summit. Washington, DC, November 2013.

A Way Forward for Policies to Reduce Gun Violence in America. Invited to be a William J. Clinton Distinguished Lecturer for the Clinton School of Public Service, University of Arkansas, Little Rock, Sept. 10, 2013.

Public Health Approaches to Reducing Gun Violence. The Group Dynamics Seminar Series, Institute for Social Research, University of Michigan, Ann Arbor, MI, October 7, 2013.

Preventing Intimate Partner Homicides by Keeping Firearms from Perpetrators of Domestic Violence. Summit on Civil Protection Orders, National Council of Juvenile and Family Court Judges, Washington, DC, June 2013.

Data and Informatics needs for gun violence prevention research. Webinar for the Public Health Informatics Working Group for the American Medical Informatics Association. June 2013.

Webinar: Gun Violence: The Healthcare Providers Role in Prevention, National Healthcare Collaborative on Violence and Abuse., June 2013.

Firearm Policy and Gun Violence Prevention. Webinar for California Public Health Grand Rounds, May 2013.

Public Health Interventions to Reduce Gun Violence to Youth. Keynote session, Pediatric Academic Societies Annual Meeting, May 2013.

Priorities for a Public Health Research Agenda to Reduce the Threat of Firearm-Related Violence: Workshop. Institute of Medicine, Washington, DC, April 2013.

Preventing Violence with Policies to Keep Guns from High-Risk People. George Washington University, School of Public Health, Forum – From Dialogue to Action: Preventing Gun Violence, April 5, 2013.



Research to Inform Policies to Keep Guns from High Risk People. The United States General Accountability Office, April 3, 2013.

Policy Priorities for Reducing Youth Gun Violence: A Way Forward. Semi-annual meeting of the Maternal and Child Health Section of the American Public Health Association, February 2013.

Importance of Assessing Threats to Study Validity: Cautions About Applying Questionable Evidence to Policies and Programs to Reduce Violence. Evidence for Violence Prevention Across the Lifespan and Around the World: A Workshop of the Forum on Global Violence Prevention, Institute of Medicine, Washington, DC, January 23-24, 2013.

Preventing Gun Violence to Youth. Keynote presentation, King Holiday Celebration, Martin Luther King, Jr. Center for Non-Violence, New York, NY, January 2013.

Changing the Code of the Street in Baltimore's Most Violent Neighborhoods: Evaluation of a *CeaseFire*-like Intervention. Patricia F. Waller Lecture. University of North Carolina, October 2012.

Reducing Risk for Reassault of Victims of Intimate Partner Violence. Network for Public Health Law's Eastern Region Symposium. University of Maryland Law School, Baltimore, June 26, 2012.

Firearm Seller Accountability Measures and the Diversion of Guns to Criminals. Congressional briefing organized by George Mason University's Center for Evidence Based Crime Policy, Washington, DC, February 2012.

Research with Victims of Intimate Partner Violence: Risks, Benefits, and Safety Strategies. Plenary session, Advancement of Ethical Research Conference, National Harbor, MD, December 2011.

Evaluating Baltimore's Replication of Chicago's *CeaseFire* Program: Effects on Youth Attitudes and Gun Violence. Centers for Disease Control and Prevention, Atlanta, January 7, 2010.

Public Health Approaches to Gun Violence Prevention. Conference on Promoting Community Safety and Preventing Violence: Integrating Lessons from Research and Practice. Ohio State University, Columbus, OH, June 2009.

Keys to States Keeping Guns From Criminals and Reducing Gun Violence. Meeting of State Legislators Against Gun Violence, Gracie Mansion, New York, May 8, 2009.

Effects of Baltimore's Safe Streets Program: A Public Health Approach to Reducing Gun Violence. Trauma Seminar Series, Johns Hopkins Hospital, March 2009.

Effective Strategies for Combating Illegal Guns and Gun Violence. Roundtable on Gun Violence Prevention, International Association of Chiefs of Police, Chicago, IL, November 2008.

Research Supporting the Lethality Assessment Program. Maryland Judicial Conference, Linthicum Heights, MD, June 20, 2008.

Evidence-Based Strategies for Reducing Illegal Guns and Gun Violence. Seminar for the Baltimore

Police Department Command Staff Training, Baltimore, May 22, 2008.

Preventing Gun Violence. Invited seminar for the Baltimore City Circuit Court Judges, April 2008.

How Cities Can Reduce Gun Violence. Mid-Atlantic Regional Meeting, Mayors Against Illegal Guns, March 2007. Strategies to Reduce Illegal Gun Trafficking. Harvard Injury Control Research Center, January 2007.

Expert Panel, Midwest meeting of Mayors Against Illegal Guns, Chicago, October 2006.

Expert Panel for Mayors Against Illegal Guns Summit. New York, April 2006.

Promising Approaches for Violence Prevention. Association of Baltimore Area Grantmakers, Baltimore, March 2006.

Evidence of the Effectiveness of Gun Policies. Graduate Seminar in Injury Research and Policy, Johns Hopkins Bloomberg School of Public Health, February 2004.

Recent Research on Gun Violence Prevention. Seminar at the 2003 Child Advocacy Leadership Institute, Advocates for Children and Youth, Washington, DC, November 2003.

Gun Policy: Understanding the Research and Defending the Data. Seminar at 2002 Child Advocacy Leadership Institute, National Association of Child Advocates, Washington, DC, November 2002.

Preventing Gun Violence Among Youth. Seminar for the University of Maryland Journalism Fellowship in Child and Family Policy, Washington, DC, November 2002.

Opportunities for Preventing Gun Violence in the U.S. Robert W. Leraas Lecture, St. Olaf College, Northfield MN, October 2002.

The Impact of Gun Safe Storage Laws on Firearm Mortality Risks among Youth. National Academy of Sciences, Institute of Medicine Meeting on Youth and Gun Violence. Washington, DC, Sept 2002.

Recent Research on the Effectiveness of Gun Policies. Citizens' Conference to Stop Gun Violence. Arlington, VA, February 2002.

How Criminally-Involved Youth Obtain Their Guns. Citizens' Conference to Stop Gun Violence. Arlington, VA, February 2002.

The Role of Alcohol in Interpersonal Violence. Johns Hopkins University, Center for Injury Research and Policy Seminar, October 2001.

Risk Factors for Near Fatal Intimate Partner Assaults. Johns Hopkins University, Department of Mental Hygiene's Seminar Series on Violence Research, September 2001.

Effects of child access prevention gun laws on unintentional gun deaths to children. Presented at the annual meeting of the Handgun Epidemic Lowering Plan (HELP) Network, Atlanta, April 2001.



Public health models for reducing gun violence. Grand rounds presentation at George Washington University School of Medicine, Washington, DC, April 2000.

Methodological challenges to studying risk factors for intimate partner homicide. Seminar for the Center for Injury Research and Policy, Johns Hopkins School of Public Health, March 1999.

School-based interventions to reduce youth violence: Do our programs fit the problem? Annual conference of Maryland State School Health Council, Ocean City MD, April 1998.

The role of health professionals in the prevention of youth violence. Continuing medical education seminar at Bethesda Memorial Hospital, Boynton Beach, FL, February 1998.

Determinants of youth violence and scientific support for interventions. Best Practices in Adolescent Health Conference, Annapolis MD, May 1996.

Media advocacy and public health: A case study of a campaign to increase support for handgun restrictions. Johns Hopkins University School of Public Health Seminar, April 1995.

The evaluation of the policy program of the California Wellness Foundation's Violence Prevention Initiative, MPH Seminar, November 1995.

The limitations of skill-focused conflict resolution curricula for reducing youth violence. Handgun Epidemic Lowering Plan (HELP) Network Annual Meeting. Chicago, September 1994.

Promising public health approaches to violence prevention. Presentation to the Board of Directors, Physicians for Social Responsibility, Bethesda, MD, March 1994.

The ability of gun laws to reduce deaths and injuries. Presentation to the Maryland State Office of Strategic Drug Enforcement Coordination, Columbia, MD, January 1994.

The limitations of conflict resolution curricula for adolescents. National Symposium on Violence, Safety, and Health in Urban Schools. Sponsored by the Council of Great City Schools, Washington, DC, December 1993.

The role of public health in violence prevention. JHU Seminar sponsored by the Department of Mental Hygiene and The Injury Prevention Center, December 1993.

Research on Strategies to Prevent Youth Violence. Creative Solutions to Problem of Urban Violence. Symposium sponsored by the Baltimore Urban League and the YMCA. Baltimore, April 6, 1993.

Public Health Professionals' Role in Reducing Injuries from Violence. Preventive Medicine in Minority Communities: First or Last Resort? Symposium sponsored by the Student National Medical Association of The Johns Hopkins School of Medicine. Baltimore, MD, April 3, 1993.

Health Professionals' Role in Limiting Children's Access to Firearms. Surgeon General's Invitational Workshop. Keeping Kids Safe: Strategies for Preventing Violence and Injury, Columbia, MD, November 19, 1992.

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A Legislative Agenda for Violence Reduction. Consortium of Virginia Urban Municipalities, Williamsburg, VA, July 10, 1992.

Keynote Address: The epidemiology of violence and public health approaches to the problem. 13th Annual Institute of the Virginia Organization of Health Care Social Workers, Richmond, June 1992.

Research Objectives

To study the causes and prevention of interpersonal and self-inflicted violence and associated injuries; to study the effectiveness interventions intended to reduce severe forms of violence; to develop and assess instruments designed to assess the risk for future violence.

Keywords

violence, violence prevention, firearm injuries, gun policy, domestic violence, substance abuse

Community Involvement:

Coach, Bethesda-Chevy Chase Baseball Youth League 2001- 2010.

Served as Co-Chair of Social Justice Committee and as a member of the Board of Trustees at Temple Emanuel, Kensington, MD, 2004- 2007.

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## **Declaration Exhibit 2**

**EXPERT REPORT OF DANIEL WEBSTER, ScD**

I have been retained as an expert by the Maryland Attorney General's Office to provide an opinion on the research evidence relevant to the provision of the Firearm Safety Act of 2013 that requires purchasers of regulated firearms to obtain a Handgun Qualification License, a policy that is generally referred to a Permit to Purchase (PTP) or handgun purchaser licensing law.

**RELEVANT CREDENTIALS**

I am Professor of Health Policy and Management, Co-Director for Research at the Center for the Prevention of Youth Violence, and Director of the Johns Hopkins Center for Gun Policy and Research at the Johns Hopkins Bloomberg School of Public Health. Additionally, I head the Johns Hopkins-Baltimore Collaborative for Violence Reduction, a technical assistance and applied research support to the Baltimore Police Department and the State's Attorney for Baltimore City.

I began my career in public safety research in 1985 as a Research Associate at the University of Michigan's School of Public Health directing ground-breaking research on the association between alcohol use patterns of parents and their offspring during adulthood as part of longitudinal community health cohort study. I have devoted most of my research since then on studies relevant to gun-related injuries and violence. I have a Master of Public Health degree from the University of Michigan (1985) and a doctorate in Health Policy and Management from the Johns Hopkins School of Public Health (1991). This graduate training included many advanced courses in epidemiology, research methods, and statistical analysis.

Immediately prior to joining the faculty at Johns Hopkins, I directed a program on violence research at the Washington Hospital Center in Washington, DC. I joined the faculty of the Johns Hopkins School of Public Health in 1992, and since 2010 have been a tenured Professor of Health Policy and Management with a joint appointment in the School of Education's Division of Public Safety Leadership. I teach graduate courses on violence prevention. Previously, I taught courses in research and evaluation methods at Johns Hopkins and served on the steering committee of a pre- and post-doctoral training program in violence prevention research funded by the National Institutes of Health and as core faculty on a NIH funded pre- and post-doctoral research program in drug dependence epidemiology.

I have directed numerous studies related to gun violence and its prevention. I have published over 100 articles in scientific, peer-reviewed journals, the vast majority of these addressed some aspect of violence and/or firearm injuries and their prevention. I am the lead editor of a book entitled Reducing Gun Violence in America: Informing Policy with Evidence and Analysis by Johns Hopkins University Press (2013), and am the lead author for two chapters and co-author on three other chapters in this book. In addition, I served as special editor or co-editor of three special issues on gun violence for top tier public health journals. My curriculum vita, detailing these publications, is attached.

The Johns Hopkins Center for Gun Policy and Research was established to conduct rigorous research into gun policy questions, look objectively at all available data, and analyze and report the results. Where the data and research, considered objectively, support a particular policy, we say so. Where the data and research do not support a particular policy, we say that as well. Our goal is not to advance any particular policy or agenda, but to use data and research to inform public policy decisions.

In the past four years I have testified as an expert in the following cases:

- a. *Rocky Mountain Gun Owners v. Hickenlooper*,  
Case No. 13CV33879, (City & Cty. of Denver Dist. Ct.)
- b. *Wrenn vs. District of Columbia*,  
Civil Action No. 15-00162 (CKK) (D.D.C.)
- c. *Heller vs. District of Columbia*,  
Civil Action No. 08-01289 (RMU) (D.D.C.)
- d. *Norberg v. Badger Guns, Inc.*,  
No. 10 CV 020655 (Cir. Ct. of Wis., Milwaukee Cty.)
- e. *Lopez vs. Badger Guns, Inc.*,  
No. 10 CV 018530 (Cir. Ct of Wis., Milwaukee Cty.,)
- f. *Cook v. Hickenlooper*,  
Civil Action No. 13-CV-1300-MSK-MJW (D. Colo.)
- g. *Kolbe v O'Malley*,  
No.: 1:13-cv-02841-CCB (D. Md.)

I am being compensated at a rate of \$350 per hour.

### **THEORY AND RESEARCH EVIDENCE RELEVANT TO MARYLAND'S HANDGUN QUALIFICATION LICENSING REQUIREMENTS**

In this report, I will present the underlying theory and empirical evidence that demonstrates that Permit to Purchase (PTP) laws, of which Maryland's HQL requirements is a type, are an effective means of preventing: 1) the diversion of guns for criminal purposes (e.g., straw purchases), 2) homicides, 3) suicides, and 4) possibly, serious injuries and deaths to law enforcement officers.

#### **I. Theory of How Firearm Purchaser Permit/License Requirements Could Reduce Firearm Violence**

Requiring all purchasers of handguns and other firearms to acquire a permit or license could reduce the risk of firearm violence in a number of ways. A common way in which firearms are diverted for criminal misuse is through illegal straw purchases, i.e., when someone who is not

prohibited from possessing a firearm buys one for someone who is prohibited or who is planning on using the firearm for criminal purposes (ATF 2000). Without a purchase permit requirement, straw purchases are relatively quick, low-risk encounters for the straw purchaser with the promise of immediate payment for the services by individuals who are legally prohibited from purchasing firearms. Even in states that have a waiting period for handgun purchases, straw purchasers simply have to go into a gun shop, present a government-issued ID, complete a form that the gun shop owner or employee transmits to the FBI and/or state law enforcement agency to complete the transaction. Most states do not require background checks or record-keeping for firearms transfers between non-licensed sellers and purchasers, thus the transfer from the straw purchaser to the prohibited possessor bears little risk or cost to the straw purchaser. States that do have such requirements, but without a purchaser permit or license requirement (as was the case in Maryland prior to the Firearm Safety Act of 2013), rarely prosecute individuals for failure to comply with gun laws.<sup>1</sup> While purchasers must produce government-issued identification, gun shop owners and employees often have no means to verify the authenticity of the ID or to verify that the person wishing to make the purchase is the same as the person identified in the document presented.

In contrast, many PTP laws, including the HQL provision of the Maryland's FSA require purchase applicants be fingerprinted and complete safety training requirements. In addition to reducing straw purchases and ensuring proper identification of handgun purchasers, requiring fingerprinting of firearm purchasers can also aid in prosecutions of individuals who use a gun in a violent crime or illegally transfer the firearm because it can refute a claim by the defendant that

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<sup>1</sup> Crifasi CK, Frances M, Vernick JS, Webster DW. (2018) Changes in the legal environment and enforcement of firearm transfer laws in Pennsylvania and Maryland. *Injury Prevention* January 13, 2018 [Epub ahead of print] as 10.1136/injuryprev-2017-042582.

someone else purchased the gun using the defendant's identification. Further, requiring fingerprinting of firearm purchasers allows for identification of HQL holders who are convicted of prohibiting offenses subsequent to purchase and the removal of firearms from those individuals. Thus, the HQL requirement allows police to disarm dangerous individuals.

Among the public safety benefits of the firearm safety training is the potential to positively influence the storage practices of handgun owners in the home by encouraging owners to store handguns unloaded and locked up so that the handguns are not accessible to minors or to thieves. Storing firearms locked and unloaded decreases the risk of youth being injured or killed due to unintentional shootings and suicides (Grossman et al., 2005; Webster et al., 2004),<sup>2, 3</sup> and would likely reduce the risk of school shootings committed by minors because the majority of school shootings committed by minors involve firearms the youthful shooters brought from their homes.<sup>4</sup> Surveys of gun owners reveal that unsafe gun storage is common and that gun owners who take gun safety courses are more likely to store their guns locked and unloaded (Crifasi 2018).<sup>5</sup>

Another reason that PTP laws can reduce firearm violence is that the laws are likely to reduce impulse purchases when an individual is angry or despondent and is considering taking a life. Requiring that someone go to be fingerprinted for identity verification and take a safety course

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<sup>2</sup> Grossman DC, Mueller BA, Riedy C, Dowd MD, Villaveces A, Prodzinski J, et al. Gun storage practices and risk of youth suicide and unintentional firearm injuries. JAMA. 2005;293(6):707–14. <https://doi-org.proxy1.library.jhu.edu/10.1001/jama.293.6.707>.

<sup>3</sup> Webster DW, Vernick JS, Zeoli AM, Manganello JA. (2004) Effects of youth-focused firearm laws on youth suicides. JAMA 292:594-601.

<sup>4</sup> Everytown for Gun Safety, Analysis of School Shootings, January 1, 2013—December 31, 2015 (2016), finding that of shootings perpetrated by minors at primary and secondary schools and for which the source of the firearm was known, more than half of the minors obtained the gun at home (13 of 24 incidents).

<sup>5</sup> Crifasi, CK, Doucette, ML, McGinty, EE, Webster, DW, Barry, CL. (2018) Storage Practices of US Gun Owners. *American Journal of Public Health* 108(4): 532-537.



requires intention and planning over a matter of days, providing time for the potential impulse buyer to change his or her mind. This is particularly important in the case of suicides because many suicidal acts occur within minutes or hours of a suicidal thought.

## **II. Evidence That Handgun Purchaser Licensing Laws Reduce the Diversion of Guns for Criminal Use**

There have been a number of published research studies of the diversion of guns into the underground market for criminal use that rely upon crime gun trace data. In many law enforcement agencies, police routinely submit information to the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) about the guns that they recover from criminal suspects or crime scenes that allows them to trace the path a gun takes from factory assembly line, to wholesale distributor, to retail gun shop, a purchaser and, ultimately, to a criminal gun possessor. Using the make, model, caliber, and serial number of the firearm, the ATF contacts actors in the supply chain down to the retail seller in order to determine who purchased the firearm and when they purchased it. The ATF<sup>6</sup> and many leading firearm researchers use crime gun trace data to monitor and study markers of illegal diversion, especially illegal straw purchases and other methods of diverting new guns into the underground market.<sup>7</sup> A team of top scholars who study the diversion of guns to criminals and have been recognized with numerous honors for their scholarship on this and related topics, thoroughly refuted claims and criticism made by Gary Kleck<sup>8</sup> about the validity of using proxies for illegal transfers from gun trace data such as relatively brief intervals between retail sale and the guns recovery by law enforcement

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<sup>6</sup> Bureau of Alcohol, Tobacco and Firearms (ATF). *Following the Gun: Enforcing Federal Laws Against Firearms Traffickers*. Washington: Bureau of Alcohol, Tobacco and Firearms; 2000.

<sup>7</sup> Braga AA, Wintemute GJ, Pierce GL, Cook PJ, Ridgeway G. (2012) Interpreting the empirical evidence on illegal gun market dynamics. *Journal of Urban Health* 89(5):779-793. DOI 10.1007/s11524-012-9681-y.

<sup>8</sup> Kleck G, Wang S-YK. The myth of big-time gun trafficking and the overinterpretation of gun tracing data. (2009) *UCLA Law Review*. 2009; 56: 1233–1294.

commonly referred to as “time to crime” (TTC). This study by Braga and colleagues demonstrated that: 1) illegal straw purchases account for 41.5% of guns in ATF gun trafficking investigations, 2) that guns traced to crime are “disproportionately concentrated among newer guns” than is the stock of guns owned by civilians, 3) that most of those relatively new crime guns were connected to criminal possessors who were not the original purchasers of the guns, and 4) “data on obliterated serial numbers are very limited and must be used with great caution to avoid incorrect conclusions about illegal gun market dynamics.”

The other key variables in crime gun trace data for understanding how state gun sales regulations are related to the diversion of guns for criminal use are the state in which the firearm was sold and the state in which the firearm was recovered by law enforcement. If a state’s gun laws are relatively effective in keeping firearms from being used in crime, any criminal that does access firearms would have to be more reliant upon guns that are trafficked across state lines. Conversely, if a state’s firearm laws provided inadequate deterrence against illegal diversions of guns, a larger share of its crime guns would come from within-state sources and they would export more guns for criminal use into other states, especially those states with laws that prevent illegal diversions into the criminal market.

A series of studies consistently show negative associations between the presence of PTP or handgun purchaser licensing laws and the share of crime guns with short time-to-crime intervals and with exporting guns for criminal use, and positive associations between PTP laws and the share of crime guns which originated in out-of-state sales. Each of these associations is consistent with the notion that PTP laws deter illegal diversions of guns for criminal use. In a study I published with colleagues in 2009, we analyzed data from the years 2000-2002 in 54 U.S. cities that participated in the Youth Crime Gun Interdiction Initiative (YCGII; Washington, DC,

which essentially banned all handgun sales from 1977 to June 2008, was excluded).<sup>9</sup> Each YCGII city agreed to submit information to the ATF for all crime guns recovered by local law enforcement agencies, thus reducing the potential problem of guns being selectively traced (e.g., only guns recovered from drug-selling groups). The primary outcome of interest was the percentage of all crime guns that were recovered within 12 months of a retail sale that took place in the same state as the gun was recovered by police, and the purchaser of record was not the criminal possessor. Of the seven cities with the lowest indicator of within-state diversion under 1 year TTC, six (Camden, NJ; Newark, NJ; New York, Boston, Jersey City, St. Louis) had handgun purchase licensing systems. None of the ten cities with the highest level of the intrastate diversion had a handgun purchaser licensing or PTP law. After controlling for other key gun laws, distance to states with weak gun laws, and the number of people living in states with weaker gun laws living within a 50-mile radius of the city, the strongest form of handgun purchaser licensing (allows discretion to deny permits if the background check reveals something indicating the applicant could be dangerous) was associated with 68 percent lower levels of intrastate diversions of guns for criminal use.

We undertook a somewhat similar study using crime gun trace data aggregated at the state level for 2009 to examine the association between state gun sales laws and per capita rate of crime guns exported to criminals in other states after controlling for potential confounders.<sup>10</sup> We found PTP laws were strongly associated with lower levels of crime gun exports. Per capita exporting of crime guns was negatively associated with laws that allowed law enforcement

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<sup>9</sup> Webster DW, Vernick JS, Bulzacchelli MT. Effects of state-level firearm seller accountability policies on firearms trafficking. *Journal of Urban Health* 2009; 86:525-537.

<sup>10</sup> Webster DW, Vernick JS, McGinty EE, Alcorn T. (2013) "Preventing the Diversion of Guns to Criminals through Effective Firearm Sales Laws," pp. 109-122. In Webster DW, Vernick JS, Eds. *Reducing Gun Violence in America: Informing Policy with Evidence and Analysis*. Baltimore, MD: Johns Hopkins University Press.

discretion to deny applications based on dangerousness in applicant's record (-76%,  $p=.001$ ) and PTP laws that did not allow discretionary denial but did require fingerprinting (-45%,  $p=.02$ ). Nondiscretionary PTP laws without fingerprinting of applicants were associated with 25% lower levels of crime gun exporting, but the difference was not statistically significant ( $p=.15$ ). These effects were independent of other laws that the states had including universal background check requirements.

A recent study used crime gun data aggregated at the state level for the years 2006-2016 to examine the association between state gun laws and the share of the state's crime guns that originated from within state retail sales.<sup>11</sup> Again, if state gun laws are effective in preventing the diversion of guns for criminal use, a smaller share of their crime guns will have been sold by in-state firearm dealers. In addition to finding strong negative associations between the strength of a state's gun laws and the share of crime guns originating from in-state gun sales, the researchers found that PTP laws had the strongest bi-variate association with lower levels of in-state crime guns and one of the strongest overall protective effects after controlling for the presence of other gun laws. These findings are consistent with those of prior studies.<sup>12</sup>

Most of the studies examining the association between PTP and other gun sales regulations and indicators of diversion or trafficking of guns have not focused on longitudinal associations – whether the gun diversion indicators change when PTP laws change. Observing these longitudinal or temporal associations is critical to the internal validity of a study and to the

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<sup>11</sup> Collins T, Greenberg R, Siegel M, Xuan Z, Rothman EF, Cronin SW, Hemenway D. (2018) State Firearm Laws and Interstate Transfer of Guns in the USA, 2006–2016. *Journal of Urban Health*. Published online 18 April 2018.

<sup>12</sup> Webster DW, Vernick JS, Hepburn LM. (2001) Relationship between licensing, registration, and other gun sales laws and the source state of crime guns. *Injury Prevention* 7:184–189.

ability to draw causal inferences from the associations.<sup>13</sup> There have been two opportunities to measure changes in measures of gun diversion for criminal use in response to changes in PTP laws and both have demonstrated strong and clear associations in the direction consistent with PTP laws being protective against such diversions. First, Missouri had a PTP law for handguns that dated back to the 1920s. But state lawmakers repealed Missouri's PTP law as of August 28, 2007. In a 2013 study I used ATF crime gun trace data for the period 2002-2011 for guns recovered in Missouri to depict a sharp increase in the share of crime guns that had been sold a) less than three months prior to police recovery of the weapon, b) three to twelve months prior to recovery, and c) one to two years prior to recovery. What is evident by inspection of the data in Table 8.1 below copied from Webster and Vernick (2013) are sharp increases that coincide with the repeal of Missouri's PTP law.<sup>14</sup> The less than three months TTC guns jump from 3.4% in 2006 to 4.5% in 2007 (four months of which included post-PTP repeal) to 9.4% in 2008, nearly 2.8 times as high as the figure for 2006, and remained elevated through 2011. The shift upward in the crime guns with TTC in the 3 to 12 months range increased sharply beginning in 2008, the first full year the PTP law had been repealed, the levels during 2008-2011 being 2.4 times higher than the levels during the 2002-2006 period when the PTP was in effect (mean of 13.9% vs. 5.7%). The share of Missouri crime guns with a TTC of between one and two years takes a similarly large and abrupt shift upward beginning in 2009, the date of crime guns sale (2007-2008) coinciding with the date of the PTP repeal. Through the most recent year of data available

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<sup>13</sup> Ward AC. (2009) The role of causal criteria in causal inferences: Bradford Hill's "aspects of association. *Epidemiological Perspectives and Innovations*. 6:2 Published online 2009 Jun 17. doi: 10.1186/1742-5573-6-2.

<sup>14</sup> Webster DW, Vernick JS, McGinty EE, Alcorn T. (2013) "Preventing the Diversion of Guns to Criminals through Effective Firearm Sales Laws," pp. 109-122. In Webster DW, Vernick JS, Eds. *Reducing Gun Violence in America: Informing Policy with Evidence and Analysis*. Baltimore, MD: Johns Hopkins University Press.

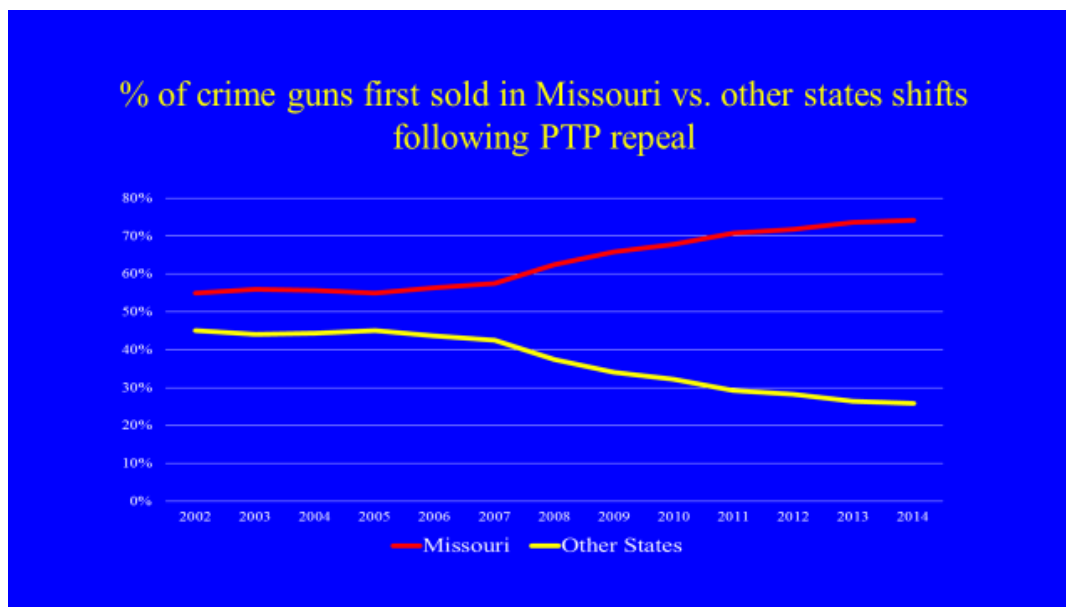
(2016), the share of Missouri crime guns with TTCs under 12 months is 23.7%, which is 2.7 times higher than the pre-PTP-repeal share of 8.7%.<sup>15</sup>

*Table 8.1* Percentage of Missouri Crime Guns with Short Time Intervals between Retail Sale and Recovery by Police for Years 2002–2011

Year	Up to 3 mont hs	3–12 mont hs (%)	1–2 year s
2002	2.9	5.2	5.2
2003	3.2	5.3	6.1
2004	2.1	5.6	5.7
2005	3.3	5.1	6.6
2006	3.2	7.5	7.2
2007	4.5	7.9	7.1
2008	9.4	12.6	6.7
2009	8.1	15.0	12.7
2010	7.6	13.7	13.0
2011	8.5	14.3	12.7

Also consistent with the argument that Missouri’s repeal of its PTP law was facilitating criminal access to firearms is the fact that the share of crime guns that had been sold in retail transactions within Missouri began trending upward at the time of the repeal from a steady 55%-57% during the 2002-2006 period before the law was repealed to eventually 75% in 2014.

<sup>15</sup> Bureau of Alcohol, Tobacco, Firearms and Explosives. Firearms Trace Data, 2016: Missouri. Accessed May 15, 2018. <https://www.atf.gov/firearms/docs/undefined/2016tracestatsmissouripdf/download>



I was senior author of a recent study led by Dr. Cassandra Crifasi that was published in a special issue of the Russell Sage Foundation Journal for Social Sciences that focused on the latest research on underground gun markets.<sup>16</sup> The study assessed whether crime gun trace diversion metrics changed in response to Maryland's Firearm Safety Act (FSA) of 2013 and its adoption of the HQL requirement. We used granular (gun-level) data from ATF trace of each crime gun recovered by Baltimore Police Department from January 1, 2007 through September 30, 2015 and excluded guns that were found or turned in by citizens but not linked to a crime. We created a time-series of the number of crime handguns that met our primary measure of diversion shortly after a retail sale (sale to crime interval under 1 year and the criminal possessor was not the legal purchaser of record) for handguns sold by licensed dealers in Maryland based on the month in which the handgun was sold by the retailer. We used negative binomial regression models that controlled for baseline trends in the outcome variables, calendar month

<sup>16</sup> Crifasi CK, Choksey S, Buggs S, Webster DW. (2017) The initial impact of Maryland's Firearm Safety Act of 2013 on the supply of crime guns in Baltimore. *The Russel Sage Foundation Journal for the Social Sciences*, 3(5):128-140.

(to adjust for potential seasonality), and the overall number of handguns recovered by the Baltimore Police Department during the twelve months following a sales month observation (to account for variation in BPD's focus on illegal gun possession arrests). The models also controlled for the number of months handguns sold in a given month were at risk of being recovered by police in order to adjust for the relatively short observation period following the law's implementation and the truncated follow-up period for handguns sold after October 1, 2014. Based on this analysis, the FSA with its HQL requirement was associated with a 76 percent reduction in the number of handguns originally sold in Maryland that were recovered within one year of retail sale and the purchaser was not the same as the possessor. Not surprisingly, this large effect was statistically significant ( $p < .05$ ). Because the HQL could also potentially prevent persons who are legally qualified to purchase firearms from acquiring a gun for criminal purposes, we also measured the effect of the law on criminal involvement of a handgun within 12 months of its purchase within the state of Maryland and found the FSA was associated with a 59 percent reduction in this outcome.

This study also examined whether the FSA of 2013 prompted a shift towards more crime guns originating outside the state as the supply of new Maryland handguns in the underground market was constrained. As was revealed following the repeal of Missouri's PTP law, short TTC metrics can change abruptly following an important change in state gun sales regulations, but changes in the ratio of within-state versus out-of-state crime guns occur more gradually due to the fact that the average age of a crime gun is 8 to 12 years. In the case of Maryland's FSA of 2013, we observed a 20 percent increase in the number of out-of-state handguns recovered by police; however, this was not statistically significant. We obtained additional crime gun trace



data through April 2018 from the Baltimore Police Department which revealed the continued shift toward a greater share of crime guns originating from outside of the state (see below).

This study was the first of its kind to combine data from crime gun traces with survey data from persons on parole or probation by the State to assess their experiences and perceptions of the effect of a gun control law on the ease of acquiring a firearm. We surveyed 195 men who were recruited outside Maryland State parole and probation offices in Baltimore during May and June 2016. Men who asserted that they were over the age of eighteen, currently on parole or probation, and Baltimore residents were invited to complete an anonymous survey after eligibility was determined via screening questions. Surveys were self-administered using a closed-ended computerized survey instrument with audio assistance to ensure confidentiality and prevent low literacy from affecting survey participation. This was a high-risk population evidenced by the fact that 63 percent reported that they had been shot or shot at, 48 percent had been shot or shot at multiple times. Forty-one percent of respondents reported that the new gun laws had made it more difficult to get a gun and forty percent indicated that the law had made it more costly to acquire a gun. Of the 172 who responded to the question with a “yes” or “no”, 38% said the law made it more difficult to get someone to buy a gun on their behalf. These survey findings are consistent with the findings from the analyses of crime gun trace data that demonstrate a dramatic decline in guns diverted into the criminal market soon after retail purchase.

### **III. Evidence that Handgun Purchaser Licensing Laws Reduce Homicides**

A number of studies, as well as new data I present in this report below use a variety of methodologies and provide evidence that handgun purchaser licensing or Permit to Purchase (PTP) laws reduce homicides committed with firearms. Currently, ten states and the District of

Columbia has some form of purchaser licensing or permitting requirement for handguns. Efforts to estimate the impacts of these laws are difficult because the laws were implemented over a century. Thus many studies designed to estimate the effects of PTP laws over a defined time study period include data for states that had PTP laws throughout the study period and thus there were no changes to observe and data from other states that changed their PTP law status over the study period. I start with a study I co-authored with Cassandra Crifasi that was just published in the *Journal of Urban Health*.<sup>17</sup> We used death certificate data from Centers for Disease Control and Prevention for the period 1984-2015 to track annual firearm homicides in large metropolitan counties (136 US Census urbanizations codes of “Large Central Metro” and “Large Fringe Metro,” and populations greater than 200,000). We focused on these counties because firearm homicide is highest in urban areas. To estimate the effects of PTP and several other laws directly relevant to gun violence (comprehensive background check requirements absent PTP, firearm prohibitions for violent misdemeanants, Shall Issue Right to Carry laws that make it easy for civilians to carry concealed firearms, and so-called Stand Your Ground Laws) while also controlling for factors associated with homicide including poverty, unemployment, population that were Black males ages 15-24 years, changes in incarceration rates, and law enforcement expenditures. The mixed-effects Poisson regression models also included random intercepts for counties and year fixed effects to account for national trends. Through these analyses we estimate that PTP laws were associated with a statistically significant 14% reduction in firearm homicide rates. If PTP laws were also associated with reductions in homicides that did not involve firearms, we would be concerned that the estimate was biased due to omitted variables

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<sup>17</sup> Crifasi CK, Merrill-Francis M, McCourt A, Vernick JS, Wintemute GJ, Webster DW. Association between Firearm Laws and Homicide in Large, Urban U.S. Counties. *Journal of Urban Health*, Published online 21 May 2018. <https://doi.org/10.1007/s11524-018-0273-3>

that were associated with PTP laws and homicides. However, PTP laws were not associated with changes in rates of non-firearm homicides which is consistent with the hypothesis that the reduction in firearm homicides coincident with PTP is causal and that the protective effects are not negated by homicide method substitution.

Because the specific effect of Maryland's PTP law was not the goal of this study, we did not report any Maryland-specific findings in our research article. We did, however, examine the PTP law effects on Maryland urban jurisdictions in subsequent analyses for the purposes of this report and to respond to arguments put forth by the plaintiff's experts that Maryland's PTP/HQL requirements do not confer public safety benefits. Drs. Kleck and Moody claim that the HQL requirement of the FSA could not possibly be having a positive impact because homicides in Baltimore City and the state have risen during 2015-2017. Baltimore City has historically been the local jurisdiction with the majority of the state's homicides involving firearms. Many things affect homicide trends in Baltimore including changes in illegal drug markets, conflicts between gangs, and what is going on in policing. It is well known that Baltimore City experienced dramatic riots and civic unrest in late April and May 2015 following the in-custody death of Freddie Gray. These events occurred 18 months after the HQL requirement went into effect in October 2013. It is commonly known and well-documented that dramatic civil unrest prompted by actions taken by police are often followed by sharp increases in violent crime. Such sharp and dramatic increases in violent crime following such events has been attributed to "de-policing" and to a crisis in the legitimacy of law enforcement in alienated minority communities where gun violence is concentrated.<sup>18</sup> Indeed, the phenomena of de-policing followed by surge in violent

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<sup>18</sup> Rosenfeld R, Gaston S, Spivak H, Irazola S. Assessing and Responding to the Recent Homicide Rise in the United States. National Institute of Justice, U.S. Department of Justice, NCJ 251067, November 2017.

crime has been documented specifically for Baltimore City following the riots in 2015.<sup>19</sup> Given these well-known facts, it is surprising that Dr. Moody's analyses neglected to consider the important historical confounders in Maryland's 2015 and 2016 firearm homicide rates that were exclusive to Baltimore City. Indeed, Dr. Moody does note that the reduction in Maryland's firearm homicide rate in 2014, prior to the riots in Baltimore City, was much steeper than the comparison states in his synthetic control analysis. "Clearly, the drop in the firearm homicide rate in Maryland in 2014 is highly unusual and would indicate a great success if it had continued." (Moody report 7).

Thus, in our study of homicide rates in large urban counties, we created separate variables to estimate the unique effects of Maryland's FSA and HQL requirement on Baltimore City versus the other large metropolitan counties (Anne Arundel, Baltimore County, Montgomery County, Prince George's County). The coefficients converted into Incident Rate Ratios from this analysis are copied below and reveal 1) that the FSA with its HQL requirement was associated with a large 48 percent reduction in firearm homicide rates in the urban jurisdictions that were not Baltimore City (variable label PTP\_MDnobaltcity), and 2) the same law was associated with a 28 percent increase in Baltimore City (variable label PTP\_MDbaltcity). Both of the estimated Maryland PTP law effects are highly significant, i.e., there is an extremely low probability that the observed effects were due to chance fluctuations in firearm homicides. But the estimate for Baltimore City is clearly biased toward more homicides because the post-PTP period overlaps with the post-unrest surge in homicides that has haunted the city through 2017. Indeed, a study that I led of homicides and nonfatal shooting trends in Baltimore City during 2004-2017 that

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<sup>19</sup> Morgan SL, Pally JA. (2016) Ferguson, Gray, and Davis: An Analysis of Recorded Crime Incidents and Arrests in Baltimore City, March 2010 through December 2015. Johns Hopkins University.  
<http://socweb.soc.jhu.edu/faculty/morgan/papers/MorganPally2016.pdf>

accounted for the impacts of a variety of policing and prevention efforts directed at gun violence in Baltimore neighborhoods estimated that the unrest increased homicides by 51%-55% and nonfatal shootings by 58%-64%.<sup>20</sup> Thus, the estimated 28 percent increase in firearm homicide rates in Baltimore City during the period in which the PTP law was in place is not surprising and does not reflect true causal effects of the law change.

**Output from Stata from mixed-effects Poisson regression analysis of firearm homicide rates for 136 urban counties.**

```
Mixed-effects Poisson regression          Number of obs   =       4,206
Group variable: countycode              Number of groups  =        136
                                         Obs per group:
                                         min =          25
                                         avg =         30.9
                                         max =          31

Integration points =      7              Wald chi2(42)    =    18944.17
Log likelihood = -19882.965             Prob > chi2      =       0.0000
```

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firearmhomicide	IRR	Std. Err.	z	P> z	[95% Conf. Interval]
PTP_noMD	.8911427	.0229988	-4.47	0.000	.8471869 .9373792
<b>PTP_MDnobaltcity  </b>	<b>.5242726</b>	<b>.059731</b>	<b>-5.67</b>	<b>0.000</b>	<b>.419352 .655444</b>
<b>PTP_baltcity  </b>	<b>1.281044</b>	<b>.1085327</b>	<b>2.92</b>	<b>0.003</b>	<b>1.085047 1.512445</b>
CBC_only	1.158632	.0129142	13.21	0.000	1.133595 1.184222
RTC_any	1.04536	.0102931	4.51	0.000	1.025379 1.06573
SYG	1.072739	.0123357	6.11	0.000	1.048832 1.097191
VM	1.144021	.0131459	11.71	0.000	1.118543 1.170079
AAMaleYouthPer	1.533046	.0209053	31.33	0.000	1.492615 1.574573
povrate_county	.9995003	.0021285	-0.23	0.814	.9953373 1.003681

<sup>20</sup> Webster DW, Buggs SAL, Crifasi CK. Estimating the Effects of Law Enforcement and Public Health Interventions to Reduce Gun Violence in Baltimore. Johns Hopkins Center for Gun Policy and Research, Johns Hopkins Bloomberg School of Public Health, January 2018.

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unemprate_county		1.004281	.0020225	2.12	0.034	1.000325	1.008253
incarc_rate		.9999652	.0000414	-0.84	0.400	.9998841	1.000046
leo_expend100k		.9945243	.0001629	-33.52	0.000	.9942051	.9948436
yearcode							
1985		1.013614	.0174395	0.79	0.432	.9800032	1.048378
1986		1.136108	.0190907	7.59	0.000	1.0993	1.174148
1987		1.122748	.019263	6.75	0.000	1.085621	1.161145
1988		1.26369	.0216667	13.65	0.000	1.22193	1.306878
1989		1.37544	.0238321	18.40	0.000	1.329514	1.422952
1990		1.614118	.0271746	28.44	0.000	1.561726	1.668268
1991		1.705069	.0283562	32.09	0.000	1.650388	1.761561
1992		1.66259	.0282574	29.91	0.000	1.608119	1.718907
1993		1.729868	.030083	31.51	0.000	1.6719	1.789845
1994		1.632285	.0295349	27.08	0.000	1.575412	1.691211
1995		1.426321	.027121	18.68	0.000	1.374143	1.48048
1996		1.25451	.0248359	11.45	0.000	1.206765	1.304144
1997		1.155818	.0237346	7.05	0.000	1.110223	1.203286
1998		1.024061	.0220055	1.11	0.269	.9818269	1.068112
1999		.9418771	.0209189	-2.70	0.007	.9017564	.9837829
2000		.9566648	.0213991	-1.98	0.048	.9156294	.9995393
2001		.8171034	.0176464	-9.35	0.000	.7832389	.8524322
2002		1.023366	.0217487	1.09	0.277	.9816151	1.066893
2003		.8306659	.0173861	-8.86	0.000	.7972792	.8654507
2004		.9971146	.0217538	-0.13	0.895	.9553766	1.040676
2005		1.060781	.0234798	2.67	0.008	1.015746	1.107814
2006		1.096444	.0246662	4.09	0.000	1.04915	1.145871
2007		1.066003	.0243311	2.80	0.005	1.019366	1.114774
2008		1.007524	.0228908	0.33	0.741	.9636433	1.053403
2009		.9032997	.0208078	-4.41	0.000	.863424	.9450169
2010		.8747842	.0203588	-5.75	0.000	.8357782	.9156107
2011		.8474495	.0196532	-7.14	0.000	.8097923	.8868579
2012		.8802334	.0202548	-5.54	0.000	.8414165	.9208409
2013		.8474369	.019932	-7.04	0.000	.8092578	.8874173
2014		.8477609	.0208556	-6.71	0.000	.8078545	.8896387

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```
|
      _cons | .0000182   1.26e-06 -156.89    0.000       .0000158       .0000208
ln(Population) |          1   (exposure)
-----+-----
Random-effects Parameters |   Estimate    Std. Err.      [95% Conf. Interval]
-----+-----
countycode: Identity     |
                        sd(_cons) |   .7345803    .0460396        .6496665        .8305925
-----+-----
LR test vs. Poisson model: chibar2(01) = 32744.22       Prob >= chibar2 = 0.0000

. estat ic
```

A separate study of state-level homicide rates during 1980-2011 attempted to estimate the effects of PTP laws and found a negative association between PTP laws and homicide rates that was not statistically significant.<sup>21</sup> However, in that study, the researcher coded California and Nebraska as each having PTP laws when they do not. In neither of these states is it a requirement that handgun purchasers first obtain a permit or license to purchase a handgun before they can legally purchase a firearm from a licensed dealer. The researcher also coded Missouri as having adopted PTP in 1981 when the state has had a PTP requirement for handguns dating back to the 1920s. As a result of these basic errors of measuring PTP laws, the estimates of the impact of PTP laws on homicides from this study are not valid.

Firearm ownership by domestic violence offenders can elevate the risk of intimate partner homicides by five-fold above that of unarmed abusers after controlling for other factors.<sup>22</sup> Many

<sup>21</sup> Gius M. (2017) Effects of Permit-to-Purchase Laws on State-Level Firearm Murder Rates. *Atlantic Economic Journal* 45:73–80. DOI 10.1007/s11293-016-9529-z

<sup>22</sup> Campbell JC, Webster DW, Koziol-McLain J, et al. (2003) Risk factors for femicide within physically abusive intimate relationships: Results from a multi-site case control study. *American Journal of Public Health* 93:1089-97.

domestic violence offenders are prohibited from possessing firearms; however, weaknesses in laws such as gaps in background check requirements and lack of a licensing system for firearm purchasers can weaken the effects of such laws. In a recent study that I co-authored with Dr. April Zeoli and others, we studied state-level variation in rates of intimate partner homicide for the years 1980-2013.<sup>23</sup> We statistically controlled for state fixed effects, percentage of the population that was married, percentage that was divorced, the ratio of women to men aged 25 years and older with a college education, poverty levels, the level of monetary aid (adjusted for inflation) to low-income families of four through Aid to Families with Dependent Children/Temporary Assistance to Needy Families, funding each state received each year from the federal STOP Violence Against Women Grant Program, unemployment levels, the number of police officers per capita lagged by one year, proxy measures for gun ownership, and the rate of non-intimate partner homicides for adults aged 25 years and older to control for general homicide trends in the states over time. We found several firearm restrictions to be significantly and negatively associated with intimate partner homicide rates including PTP laws. PTP laws were independently associated with an 11 percent reduction in intimate partner homicide rates ( $p=.040$ ).

As explained above, the ability to make causal inferences from observed associations between interventions such as firearm laws, requires that the associations be temporal in nature, i.e., that statistical tests focus on how outcomes such as homicides change in relation to change in the laws. In addition to Maryland's PTP law in 2013, the most recent PTP law changes were Connecticut's adoption of PTP that went into effect October 1, 2015 and Missouri's repeal of its

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<sup>23</sup> Zeoli AM, McCourt A, Buggs S, Lilley D, Frattaroli S, Webster DW. (2017) Analysis of the strength of legal firearms restrictions for perpetrators of domestic violence and their impact on intimate partner homicide. *American Journal of Epidemiology* E-pub before print 2017 November 29. <https://doi.org/10.1093/aje/kwx362>



PTP law effective August 28, 2007. My colleagues and I estimated the impact of Connecticut's PTP law on homicides during the first 10 years the law was in effect in a study published in the American Journal of Public Health.<sup>24</sup> This study applied a research design and analytic technique known as synthetic control analysis that has been widely adopted in policy impact studies where some potential non-intervention comparison units (e.g., states that do not adopt the policy change) are far better matches with the states with the policy changes under study. The method uses values of the outcome variable (e.g., homicide rates) as well as covariates associated with the outcome variable to develop weights that minimize prediction error for the outcomes under study. Using this method with the following covariates - population size, population density (log-transformed), proportion aged 0 to 18 years, proportion aged 15 to 24 years, proportion Black (log-transformed), proportion Hispanic (log-transformed), proportion aged 16 years or older living at or below poverty, income inequality, per capita individual income, number of jobs per adult, proportion of population living in metropolitan statistical areas, law enforcement officers per 100,000 residents, and robbery rates – were used to generate the weights for states in the comparison pool (all states that did not have a PTP law in 1995) that minimize prediction error during the pre-law period 1984-1994. The model for firearm homicide rates for Connecticut produced prediction error that was one tenth the prediction error that would have occurred if all data from all non-PTP states were used to predict Connecticut's firearm homicide rate, validating the strength of this analytic technique. Using this methodology to estimate the counterfactual, we found that Connecticut's PTP law was associated with a 40 percent reduction in its firearm homicide rate over the first 10 full years the law was in effect. We used placebo permutation tests for the non-PTP comparison states to determine how unique Connecticut's reduction in

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<sup>24</sup> Rudolph KE, Stuart EA, Vernick JS, Webster DW. (2015) Association between Connecticut's permit-to-purchase handgun law and homicides. American journal of public health 105(8):e49-e54.

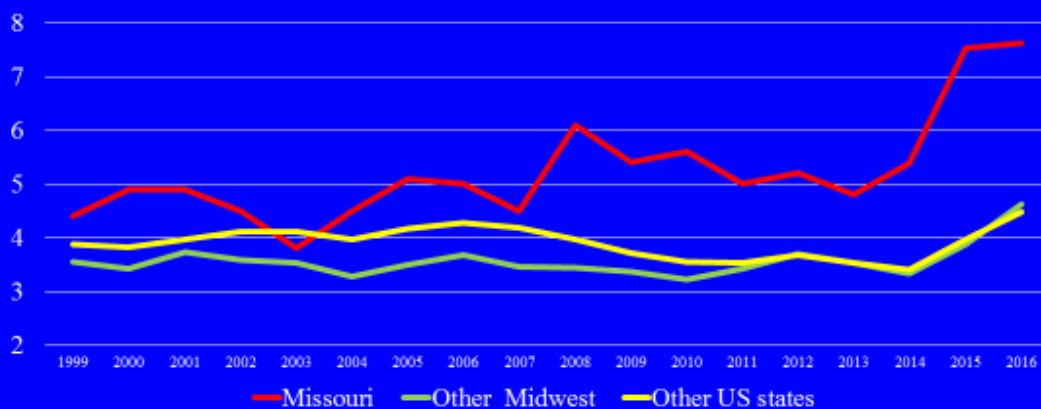
firearm homicide rates were. In the 26 comparison states with acceptable model fit, none experienced greater change in predicted firearm homicide rates than did Connecticut. Consistent with the theory that PTP laws prevent homicides by limiting firearm access to high-risk individuals and evidence that the causal factor is specific to firearms, Connecticut's PTP law was not associated with a significant change in non-firearm homicide rates.

There have been several studies of the impact of Missouri's repeal of its PTP law on August 28, 2007 on homicide rates that will be reviewed below. Each study identifies an abrupt increase in Missouri's firearm homicide rate beginning in 2008 and, contrary to the claims by Gary Kleck, this is not a one-year blip but is sustained over study periods that include up to eight years of post-repeal data and is statistically unique rather than due to random fluctuation. Below is a graph of Missouri's firearm homicide rate minus the firearm homicide rate of the rest of the states and the District of Columbia. During the recent years in which Missouri's PTP law was in place (1999-2006), Missouri's rate per 100,000 population hovered around 0.5 higher than that of the other states and then abruptly jumps to 2.0 higher than in 2008, the first full year the PTP law was not in place. Missouri's firearm homicide rate relative to the other states drifts downward to 1.4 by 2013, but then increases again at a new level greater than 3.0 in 2015 and 2016. The next figure depicts Missouri's firearm homicide rate, the population-weighted rate for other states in the Midwest, and the rate for the US overall. This also reveals a separation in Missouri's firearm homicide rate from that of national or regional comparisons that increases abruptly in 2008 and is sustained through 2016.

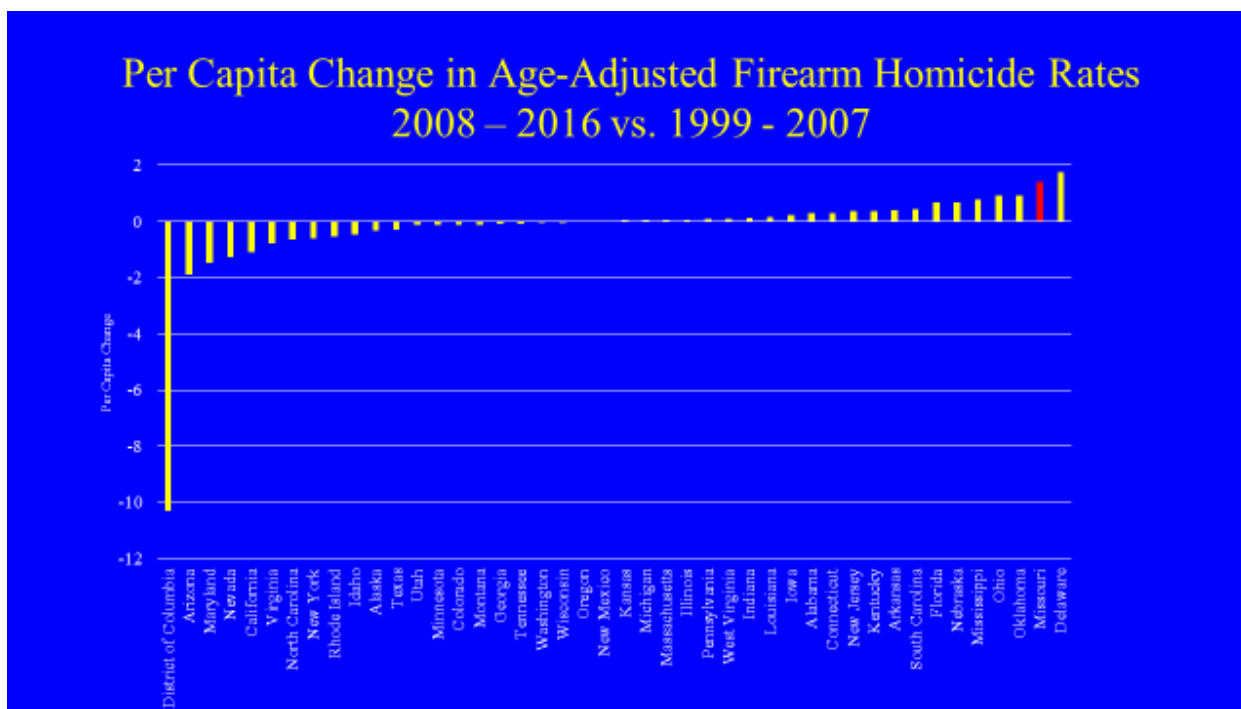
### Difference between Missouri and rest of US firearm homicide rates, 1999-2016



### Firearm homicides per 100,000 population in Missouri, Other Midwest states, All other states, 1999-2016



Indeed, only one state experienced a larger increase in per capita firearm homicide rates between the baseline period of 1999-2006 and the post-PTP repeal period of 2008-2016 than has Missouri (Delaware). The distribution of changes in the average per capita age-adjusted firearm homicides across states and the District of Columbia is depicted in the graph below between the time period before and after Missouri repealed its PTP law. Most states either had essentially no change over this period and many had reduced firearm homicide rates from the baseline period.



In 2014, my colleagues and I published a study in the American Journal of Public Health that estimated the effects of Missouri's repeal of its PTP law. In this study, we estimate the impact of the law during a period of relative stability in firearm homicide rates across states (1999-2012). Prior studies of firearm laws that include the period of 1985-1995 have been vulnerable to bias

from omitted variables, most importantly the crack cocaine epidemic that led to surging firearm homicide rates, especially among non-White urban youth, but affected homicides differently across states and across time. We used regression analyses to estimate policy change effects while controlling for changes in rates of unemployment, poverty, incarceration, burglary, law enforcement officers per capita, and the presence of four other types of state laws potentially most directly relevant to lethal violence for which there was significant change during the study period. These laws included so-called Stand Your Ground laws, right-to-carry (RTC) laws, bans of unsafe handguns including so-called Saturday Night Specials, and firearm prohibitions for young adults resulting from convictions for serious crimes adjudicated in juvenile courts. Using CDC data from death certificates our analyses found that the repeal of Missouri's PTP laws was associated with a 25 percent increase in the firearm homicide rate (an average annual increase of 1.18 firearm homicides per 100,000 population) through 2010 representing 68 additional firearm homicides annually. The PTP repeal was unrelated to changes in non-firearm homicide rates. Using data from the FBI's Uniform Crime Reports data from law enforcement agencies available through 2012, Missouri's PTP repeal was associated with a 14 percent increase in annual murder rates or 0.81 additional murders per 100,000 population representing 49 additional murders per year.

There have been additional studies that use additional years of data and different analytic methods, but each confirms that the repeal of Missouri's PTP law led to significant increases in firearm homicide rates of the approximate magnitude of my 2014 study. In one such study I co-authored with lead author Raiden Hasegawa and Dylan Small, both statisticians from the University of Pennsylvania's Wharton School, we use a statistical technique known as

bracketing to generate estimates of the repeal of PTP in Missouri on homicide rates in the state.<sup>25</sup> Most studies of gun laws and other public policies use some form of a comparative interrupted time-series design and a difference-in-difference estimator. The estimates from such approaches can be biased for estimating the causal effects if there is an interaction between historical confounders (unmeasured conditions that result in changes in the outcome variable under the treatment condition that are unique to the treated versus controls) and study group (law versus no law) during the post-law period. For example, Missouri's repeal of PTP coincided with the Great Recession and the effect of that economic shock could potentially be different between Missouri compared to surrounding states. Missouri also had higher baseline (pre-repeal) firearm homicide rates than its neighboring states. When there is no control state that is completely comparable to the state with the intervention (e.g., Missouri), a bracketing approach is recommended to distinguish the law's true effects from plausible biases by using one comparison group of states that tends to be higher than the state with the intervention and one comparison group that tends to be lower than the intervention state on the outcome.<sup>26</sup> To avoid regression to the mean, we use data from 1994-1998 to choose the upper and lower control groups. The lower control group is Iowa, Kansas, Kentucky, Nebraska and Oklahoma and the upper control group is Arkansas, Illinois and Tennessee. The population-weighted firearm homicide rate in the before period of 1999-2007 is 5.2/100,000 population for the upper control group, quite comparable to Missouri's 4.7, and 2.7 in the lower control states respectively. Using annual data for the years 1994-2016 and a standard difference-in-difference estimator we find that Missouri's PTP law is associated

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<sup>25</sup> Hasegawa RB, Webster DW, Small DS. Time-Series Design to Address Concerns about History Interacting with Group: Evaluating Missouri's Handgun Purchaser Law. Under review *Epidemiology*.

<sup>26</sup> Campbell, Donald T. (1969) *Prospective: Artifact and control*. In *Artifacts in Behavioral Research*: Robert Rosenthal and Ralph L. Rosnow's Classic Books, pages 351–382. Academic. Also, Rosenbaum, Paul R. (1987) The role of a second control group in an observational study. *Statistical Science*, 2(3):292–306.

with a 24 percent increase in firearm homicide rates (an additional 1.2 firearm homicides per 100,000 population per year) and the 95% confidence interval for the estimate is +18% to +31%. Using the bracketing approach, we estimate the PTP repeal effect was a 27% increase in firearm homicide rates (95% confidence interval: +19 to +35%) using the upper control border states and a 17% increase using the lower control border states (95% confidence interval: +11% to 23%). To rule out concerns about a possible “Ferguson Effect” resulting from the riots that occurred in August 2014 in Ferguson, Missouri might bias our estimates upward, we estimated the models with data only through 2013. The estimates did not materially affect the point estimate for PTP law effects on firearm homicide rates nor inferences about statistical significance.

Another new study examines the effects of Missouri’s PTP law repeal through the year 2013 and extends prior research on extensions of the synthetic control method for estimating the intervention effects in observational studies and how the effects vary among subgroups of interest. Using this approach, economist Morgan C. Williams, Jr. (City University of New York and National Bureau of Economic Research) derives an estimate of the overall effect of Missouri’s repeal of PTP as a 17% increase in murders (an additional 0.97 murders per 100,000 population per year).<sup>27</sup> The harmful effects estimated in Williams’ study were particularly concentrated among Black victims who had an increase of 5.17 additional deaths per 100,000 over the post-repeal period that was associated with the PTP repeal. Among Black youth ages 15-24, the PTP repeal was linked with a 33 percent increase in firearm homicide rates, 29 additional deaths per 100,000 population. Through this study, Dr. Williams also documents evidence that the change in law in 2007 led to an increase in the availability of firearms among

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<sup>27</sup> Williams, Morgan C., Jr. Gun Violence in Black and White: Evidence from Policy Reform in Missouri. April 17, 2018. [http://morganwilliamsjr.com/wp-content/uploads/2015/06/WilliamsJr\\_Morgan\\_WP\\_April\\_2018.pdf](http://morganwilliamsjr.com/wp-content/uploads/2015/06/WilliamsJr_Morgan_WP_April_2018.pdf)

Missourians based on increases in the ratio of firearm suicides to total suicides and unusually high numbers of firearm sales as indicated by background checks. Considering this evidence along with the data presented in the section above showing an increased rate of diversion of guns for criminal use shortly after a retail sale, there is ample evidence that the repeal of the PTP law increased Missourians' exposure to firearms, a likely mechanism for increasing firearm homicides but not changing non-firearm homicides.

Regardless of methodology, several studies focused on estimating the effects of the repeal of Missouri's PTP law find the law was associated with a substantial increase in firearm homicides.

#### **IV. Evidence that Permit to Purchase Laws Reduce the Risks of Law Enforcement Officers Being Shot in the Line of Duty**

Based on the evidence that PTP laws reduce the availability of firearms for criminal use, it is likely that the laws reduce the risk that law enforcement officers face of being shot in the line of duty. My colleague Cassandra Crifasi led a study that I coauthored to examine this question.<sup>28</sup> Data for the outcomes of interest were from the FBI's Law Enforcement Officers Killed and Assaulted database which includes data from reports of every line-of-duty fatal assaults and non-fatal assaults committed with a firearm or knife that result in an injury and the analyses were based on annual counts of these events by state and year. Data for fatal assaults of officers were available for the period 1984–2013 for fatal assaults and for 1998–2013 for non-fatal assaults. There were only two PTP law changes to study during the time period for analyses of fatal assaults (Connecticut's 1995 PTP law and Missouri's repeal of PTP in 2007) and only the PTP

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<sup>28</sup> Crifasi CK, Pollack K, Webster DW. (2015) The influence of state-level policy changes on the risk environment for law enforcement officers. *Injury Prevention* 2015 Dec 30. pii: injuryprev-2015-041825. doi: 10.1136/injuryprev-2015-041825. [Epub ahead of print] PMID: 26718550.



change for Missouri could be examined in the analyses of nonfatal assaults. Because these assaults are rare in a given state and year, the precision of estimates have wide confidence intervals and relatively large point estimates are not statistically significant at the traditional .05 level. In regression models that controlled for state-aggregated law enforcement expenditures, arrest rates for violent crimes, the number of sworn law enforcement officers, poverty, the percentage of the population living in Metropolitan Statistical Areas, and a proxy for gun availability (ratio of firearm suicides to total suicides), Right to Carry Laws, and Three Strikes You're Out laws. Each of the estimates were in the hypothesized direction; Connecticut's PTP law associated with an 80 percent reduction in fatal assaults of officers and Missouri's repeal of PTP was associated with a 52 percent increase; however these effects were not statistically significant. Nonfatal assaults committed with handguns against officers more than doubled after Missouri's PTP law was repealed ( $IRR=2.14$ ,  $p=.089$ ). Thus the pattern of the associations in this study are consistent with the notion that PTP laws protect law enforcement officers from being shot in the line of duty.

## **V. Effects of Permit to Purchase Laws on Suicides**

There is an overwhelming amount of research evidence that access to firearms substantially increases suicide risks.<sup>29</sup> Although most gun control laws are intended to reduce access to firearms among individuals at risk for committing acts of violence against others, interpersonal and self-directed violent behavior share many risk factors. PTP laws could both effectively screen out and prevent firearm access among individuals at high risk of suicide and also prevent impulsive firearm acquisitions that occur when a person is temporarily suicidal. Several studies

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<sup>29</sup> Miller M, Barber C, Azrael D, White R. (2013) Firearms and suicide in the United States: is risk independent of underlying suicidal behavior? *American Journal of Epidemiology* 15;178(6):946-945.

have examined the association between PTP laws and suicide rates and consistently found that PTP laws were associated with lower rates of suicide in a state after controlling for potential confounders.<sup>30,31</sup> One limitation of this research is that most of the variation examined in these studies was cross-sectional and did not isolate if or how suicide rates changed following changes in PTP policies. My colleague Cassandra Crifasi and I used synthetic control methods to minimize prediction errors with state-level suicide data and factors correlated with suicide rates for the years 1981-2012 to estimate the effects of the PTP law changes in Connecticut and Missouri explained above.<sup>32</sup> Using this method we estimated a 15.4 percent reduction in firearm suicide rates associated with Connecticut's PTP law and a 16.1 percent increase in firearm suicide rates associated with the repeal of Missouri's PTP law.

### **Conclusions From the Available Data on Permit to Purchase Handgun Laws**

The evidence described above offers consistent and compelling evidence that Permit to Purchase (PTP) laws save lives by preventing intimate partner homicides, firearm homicides generally, suicides, and, most likely, officers being shot in the line of duty. There is sound underlying theory for how PTP laws could affect these outcomes as well as data demonstrating the mechanisms of the causal effects such as preventing the diversion of guns for criminal use. Importantly, we have data indicating how Marylanders are benefiting from the law with reductions in firearm homicides in urban jurisdictions with the exception of Baltimore City during a period of turmoil in the city. Requiring prospective purchasers of handguns to obtain

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<sup>30</sup> Andrés AR, Hempstead K. (2011). Gun control and suicide: the impact of state firearm regulations in the United States, 1995–2004. *Health Policy* 101(1):95–103.

<sup>31</sup> Fleegler EW, Lee LK, Monuteaux MC, Hemenway D, Mannix, R. (2013). Firearm legislation and firearm-related fatalities in the United States. *JAMA intern. Med.* 173(9):732–740.

<sup>32</sup> Crifasi CK, Meyers JS, Vernick JS, Webster DW. (2015) Effects of changes in permit-to-purchase handgun laws in Connecticut and Missouri on suicide rates. *Preventive Med.* Jul 23, 2015. pii: S0091-7435(15)00229-7

permits or licenses for such purchases is one of the most effective policies for reducing gun violence in America.

May 25, 2018

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Date

A handwritten signature in black ink, appearing to read "Daniel Webster", written over a horizontal line.

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Daniel Webster, Sc.D.

**SUPPLEMENT TO EXPERT REPORT OF DANIEL WEBSTER, ScD**

Pursuant to Rule 26(e), I submit this supplement to my expert report previously prepared in this matter. There are two recently published studies of the effects of state firearm laws on homicides that I cited and described in my report that I recently discovered had some incorrect data on the presence or timing of the laws under study. I have contacted the journals in each case to make the corrections.

In our study by Crifasi et al. (2018)<sup>1</sup> of the effects of state firearm policies on homicide rates in large urban counties, the revised estimate of the effect of permit to purchase (PTP) laws for handguns changed from an estimated 14% reduction in firearm homicides to an 11% reduction in firearm homicides. As with the prior estimate, our revised estimate is statistically significant and there is a great deal of overlap between the confidence intervals of the point estimates for the published study and the estimates from our revised analysis that we submitted for an erratum with the Journal of Urban Health.

I used the dataset for this study to derive estimates of the effects of the adoption of Maryland's Firearm Safety Act with its HQL provision on large urban counties in Maryland and separated by Baltimore City versus the other jurisdictions. With the revised data on some of the laws, our estimates for the effects in the Maryland jurisdictions were largely unchanged from what I included in my original expert report in this case; we

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<sup>1</sup> Crifasi CK, Merrill-Francis M, McCourt A, Vernick JS, Wintemute GJ, Webster DW. Association between Firearm Laws and Homicide in Large, Urban U.S. Counties. *Journal of Urban Health*, Published online 21 May 2018. <https://doi.org/10.1007/s11524-018-0273-3>

continue to see statistically significant large reductions in firearm homicide rates in the large urban jurisdictions excluding Baltimore City.

The other study affected by errors in some of the gun law variable was the one I coauthored with April Zeoli (2017)<sup>2</sup> that examined the effects of gun laws on intimate partner homicides. In our published paper, we found that PTP laws were associated with a statistically significant 10% reduction in intimate partner homicides. However, in the revised analyses with the corrected law data, the association between PTP laws and intimate partner homicide rates is no longer statistically significant. The editors from the American Journal of Epidemiology requested a retraction and a revision that will replace the retracted article.

Aug. 1, 2018

Date

Daniel Webster

Daniel Webster

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<sup>2</sup> Zeoli AM, McCourt A, Buggs S, Lilley D, Frattaroli S, Webster DW. (2017) Analysis of the strength of legal firearms restrictions for perpetrators of domestic violence and their impact on intimate partner homicide. *American Journal of Epidemiology* E-pub before print 2017 November 29. <https://doi.org/10.1093/aje/kwx362>

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## **Declaration Exhibit 3**

# **REDUCING GUN VIOLENCE IN AMERICA**

Informing Policy with  
Evidence and Analysis

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Edited by

**DANIEL W. WEBSTER**  
and **JON S. VERNICK**

Foreword by

**MICHAEL R. BLOOMBERG**



# Reducing Gun Violence in America

*Informing Policy with Evidence and Analysis*

EDITED BY

Daniel W. Webster, ScD, MPH,  
and Jon S. Vernick, JD, MPH

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## Preventing the Diversion of Guns to Criminals through Effective Firearm Sales Laws

Daniel W. Webster, Jon S. Vernick, Emma E. McGinty,  
and Ted Alcorn

### Weaknesses in Federal Gun Laws Which Enable Criminals to Get Guns

Preventing individuals who are deemed too risky or dangerous from obtaining firearms is arguably the most important objective of gun control policies. Many perpetrators of gun violence are prohibited by federal law from purchasing firearms from a licensed dealer due to prior felony convictions or young age. Other contributions to this book provide compelling evidence that existing conditions for disqualifying someone from legally possessing firearms are justifiable and should be expanded (Vittes, Webster, and Vernick, in this volume). Wintemute (chap. 7 in this volume) and Zeoli and Frattaroli

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(in this volume) provide evidence that laws which prohibit firearm possession by persons convicted of violent misdemeanors and those who are subject to restraining orders for domestic violence can reduce violence.

Some prohibited persons will voluntarily refrain from having a firearm in order to avoid criminal sanctions. But policies that enhance firearm seller and purchaser accountability are likely to determine how effectively gun control laws prevent prohibited individuals from acquiring guns. The federal

passing a background check (Cook and Ludwig, in this volume). Licensed dealers must check purchasers' IDs, submit purchase applications to the FBI's National Instant Check System (NICS), and maintain records of all firearms acquisitions and sales so that ATF auditors can assess the dealers' compliance with gun sales laws.

Data on guns recovered by police and traced by the U.S. Bureau of Alcohol, Tobacco and Firearms (ATF) have indicated that about 85% of criminal possessors were not the retail purchaser (Bureau of Alcohol, Tobacco and Firearms 2002). This is consistent with our analysis of data from the most recent (2004) Survey of Inmates in State Correctional Facilities (SISCF) to determine the source for the handguns acquired by the 1,402 inmates incarcerated for an offense committed with a handgun. The largest proportions of offenders got their handguns from friends or family members (39.5%) or from street or black market suppliers (37.5%), sales for which there are no federal background check requirements. Licensed gun dealers were the direct source for 11.4% of the gun offenders. One in 10 offenders in our sample reported that they had stolen the handgun that they used in their most recent crime. Handgun acquisitions by offenders at gun shows and flea markets were rare (1.7 %).

It is easy to understand why offenders would prefer private sellers over licensed firearms dealers. Under federal law and laws in most states, firearm purchases from unlicensed private sellers require no background check or record keeping. The lack of record keeping requirements helps to shield an offender from law enforcement scrutiny if the gun were used in a crime and recovered by police. Indeed, of the offenders in the SISCF who were not prohibited from possessing a handgun prior to the crime leading to their incarceration, two-thirds had obtained their handguns in a transaction with a private seller.

That only 11% of handgun offenders reported acquiring their handguns from a licensed gun dealer does not mean that licensed dealers play a negligible role in the diversion of guns to criminals. Federal gun trafficking investigations indicate that corrupt licensed dealers represent one of the largest channels for the illegal gun market (Bureau of Alcohol, Tobacco and Firearms 2000), and a national phone survey of gun dealers found a willingness to make gun sales likely to be illegal relatively common (Sorenson and Vittes 2003). As articulated by Vernick and Webster (in this volume) and Braga and Gagliardi (in this volume), current federal laws provide many protections to licensed firearm sellers, and the Bureau of Alcohol, Tobacco, Firearms and Explosives lacks the resources and political power to serve as a robust deterrent to illegal gun sales.

### Prior Evidence That Better Regulation of Gun Sellers Reduces Diversions of Guns to Criminals

Weaknesses in federal gun sales laws may cause skepticism about whether gun control can work in the United States. However, states vary greatly in the nature of their gun sales laws. For example, many states extend conditions for firearm prohibitions beyond those covered in federal law to include additional high-risk groups and place additional regulations on firearm sales to prevent illegal transfers. Twelve states require retail firearm sellers to be licensed by state or local governments and allow law enforcement to conduct audit inspections of gun dealers (Vernick, Webster, and Bulzachelli 2006). Fifteen states extend firearms sales regulations to sales by private, unlicensed sellers, and two additional states require background checks for firearms sold at gun shows. Nine states have some form of licensing system for handgun purchasers, five require applicants to apply directly with a law enforcement agency and be photographed and fingerprinted, and three allow agencies to use their discretion to deny an application if they deem it to be in the interest of public safety. Additional laws enacted by states to keep guns from prohibited persons include mandatory reporting of loss or theft of private firearms, limiting handgun sales to one per person per month, and banning the sale of low-quality “junk guns” that are overrepresented in crime (Wintemute 1994; Wright, Wintemute, and Webster 2010).

A study which used crime gun trace data from 53 U.S. cities for the years 2000–2002 examined the association between state gun sales regulations and



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the diversion of guns to criminals (Webster, Vernick, and Bulzacchelli 2009). Diversion of guns to criminals was measured by the number of guns recovered by police within one year of retail sale unless the criminal possessor was the legal retail purchaser. In addition to examining state laws, this study also surveyed state and local law enforcement officials to ascertain their policies for conducting compliance inspections or undercover stings of licensed dealers. Strong regulation and oversight of licensed gun dealers—defined as having a state law that required state or local licensing of retail firearm sellers, mandatory record keeping by those sellers, law enforcement access to records for inspection, regular inspections of gun dealers, and mandated reporting of theft or loss of firearms—was associated with 64% less diversion of guns to criminals by in-state gun dealers. Regulation of private handgun sales and discretionary permit-to-purchase (PTP) licensing were each independently associated with lower levels of diversion of guns sold by in-state dealers. The finding on private sales regulations is consistent with the results of a systematic observational study of gun sales at gun shows that found anonymous undocumented firearms sales to be ubiquitous and illegal “straw man” sales more than six times as common in states that do not regulate private sales compared with California that does regulate such sales (Wintemute 2007; Wintemute, chap. 7 in this volume).

### Diversions of Guns to Criminals Following Missouri’s Repeal of Permit to Purchase Licensing

The associations between state gun sales laws and diversions of guns to criminals cited above are cross-sectional and therefore do not capture changes in gun diversions following changes in state gun sales laws. The strong association between at least some forms of PTP licensing and lower rates of gun diversions to criminals could potentially be confounded by some variable omitted from the analyses that distinguishes states that enact the most comprehensive firearm sales regulations from those that do not. There have been few noteworthy changes in gun sales laws during a period when crime gun tracing practices were more common and the data were available to track changes over time. An exception is the repeal of Missouri’s PTP law effective August 28, 2007. This law had required handgun purchasers to apply for a PTP through their local county sheriff’s office and required a PTP for all handgun sales, whether by licensed or unlicensed sellers. Following the repeal, handgun

purchasers could purchase handguns without a background check or record keeping if the seller was not a licensed dealer, and licensed gun dealers rather than sheriff's deputies processed applications to purchase handguns.

Using annual state-level data on crime guns recovered by police in Missouri and traced by the ATF for the period 2002–2011, we examined changes in commonly used indicators of illegal gun diversion—the number and proportion of guns with short sale-to-crime intervals—before and after the state repealed its PTP law. If Missouri's PTP law had been curtailing the diversion of guns to criminals, the repeal of the law should result in more short sale-to-crime guns recovered by police, and the shift in increasing crime guns should coincide with the length of time between the repeal of the law and a crime gun's recovery by police.

Such a pattern is clearly evident in the data presented in Table 8.1. The percentage of traced crime with a sale-to-crime interval of less than three months begins to increase from a pre-repeal stable mean of 2.8% to 5.0% in 2007 when the repeal was in effect for four months, and then jumps up to a mean of 8.5% for 2008 through 2011. The percentage of crime guns with sale-to-crime intervals of three to twelve months increased sharply beginning in 2008 from a pre-repeal mean of 6.2% to 14.0% for 2008–2011 when all such guns were purchased after the law's repeal. If the PTP repeal increased the diversion of guns to criminals, the percentage of crime guns recovered at a

Table 8.1 Percentage of Missouri Crime Guns with  
Short Time Intervals between Retail Sale and Recovery  
by Police for Years 2002–2011

Year	Up to 3 months (%)	3–12 months (%)	1–2 years (%)
2002	2.9	5.2	5.2
2003	3.2	5.3	6.1
2004	2.1	5.6	5.7
2005	3.3	5.1	6.6
2006	3.2	7.5	7.2
2007	4.5	7.9	7.1
2008	9.4	12.6	6.7
2009	8.1	15.0	12.7
2010	7.6	13.7	13.0
2011	8.5	14.3	12.7

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one to two years sale-to-crime interval should increase beginning in 2009. Indeed, that is what happened. These guns increased sharply from a mean of 6.4% to 13.0%. The sharp increase in very short sale-to-crime intervals for guns in Missouri was not part of a national trend; in fact, the average sale-to-crime interval increased nationally from 10.2 years in 2006 to 11.2 years in 2011.

Because states with stronger gun sales laws tend to attract guns originating in states with weaker gun laws (Cook and Braga 2001; Webster, Vernick, and Hepburn 2001), we also compared trends in the proportion of Missouri's crime guns that were initially purchased in Missouri versus those that had been purchased outside of the state. Consistent with our hypotheses that Missouri's PTP had been preventing guns from being diverted to criminals, the share of crime guns originating from Missouri increased from a mean of 55.6% when the PTP law was in place to 70.8% by 2011, while the proportion that had originated from out of state gun dealers decreased from 44.4% before the repeal, began dropping in 2008, and was 29.2% in 2011. This is a remarkable change for an indicator that tends to change very little over time.

### Effects of State Gun Sales Laws on the Export of Guns to Criminals across State Borders

In 2009, 30% of crime guns traced by the ATF were recovered in states other than the state where they were originally sold; however, there is great variation across states with respect to the proportion of crime guns which were originally sold by gun dealers in other states. Mayors Against Illegal Guns (2010) published a report showing great disparities across states in the number of crime guns exported per capita. Bivariate analyses indicated that each of ten

versus weak gun laws and found that states with weak gun laws tended to export guns to states with strong gun laws (Knight 2011).

The present study adds to this literature by using crime gun trace data from the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) to examine the cross-sectional association between state gun laws and the per capita rate of exporting crime guns across the 48 contiguous U.S. states. The following state gun sales laws were considered: strong regulations of retail



gun dealers<sup>1</sup>; permit-to-purchase (PTP) licensing; private sales regulations (mandatory background checks of sellers or valid PTP); handgun registration; mandatory reporting to law enforcement of theft and loss of firearms by private owners; whether the state has criminal penalties for dealers who fail to conduct background checks or has penalties for illegal straw purchasers; one-gun-per-month restrictions; assault weapon bans; and junk gun bans. Three variations of PTP laws were examined: (1) discretionary PTP laws which give law enforcement the discretion to refuse to issue permits; (2) PTP with fingerprinting which requires applicants to appear at the law enforcement agency that issues the permits to be photographed and fingerprinted; and (3) nondiscretionary PTP laws which require a permit to purchase a firearm but do not require applicants to go to agencies to be fingerprinted.

We used negative binomial regression models with robust standard errors to estimate the association between state gun laws and the per capita rate of crime guns exported to criminals in other states after controlling for potential confounders. Key confounders controlled for in the analyses were the prevalence of gun ownership, out-of-state population migration, and the number of people living near the border of states with strong gun laws. State population served as an offset variable so that transformed regression coefficients could be interpreted as incident rate ratios (IRR) and percentage reductions in risk.

Data on crime gun exports were obtained from the 2009 state-level crime gun trace data posted on the ATF's website. ATF defines crime guns as recovered firearms that were "illegally possessed, used in a crime, or suspected to have been used in a crime." In 2009, 61% of the guns that police submitted to ATF were successfully traced to the first retail sale.

Data on state gun laws were obtained through legal research and from ATF and U.S. Department of Justice Publications. Oak Ridge National Laboratory's LandScan global population distribution data was used with arcGIS Version 10 to calculate state border population variables used as control variables in statistical models. These control variables included population within 50 miles of a bordering states with the strongest gun control laws<sup>2</sup> and states with medium level of gun control.<sup>3</sup> Household prevalence of firearm ownership was obtained from the Behavioral Risk Factor Surveillance System 2001 survey (Centers for Disease Control and Prevention 2001), and measures of state migration<sup>4</sup> were obtained from the American Community Survey (ACS) 2005–2009 five-year estimates. Finally, we measured two variables indicating that a state borders Canada or Mexico, respectively.



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States that exported the most crime guns per 100,000 population were Mississippi (50.4), West Virginia (47.6), Kentucky (35.0), and Alabama (33.4). Of these four states, three (Mississippi, West Virginia, and Kentucky) had none of the state gun laws we examined. Alabama penalized gun dealers who failed to conduct background checks but had no other laws of interest in place. States that exported the fewest crime guns per capita—New York (2.7), New Jersey (2.8), Massachusetts (3.7), and California (5.4)—each had strong gun dealer oversight, regulated private sales, and handgun registries. New York, New Jersey, and Massachusetts also had discretionary PTP and required reporting of firearm theft/loss.

Data from the regression analysis are presented in Table 8.2. Due to high collinearity (Variance Inflation Factor > 10), assault weapons bans and handgun registration laws were dropped from the final models. Statistically significant lower per capita export of crime guns across state borders was found for

Table 8.2 Estimates of association between state gun laws and crime gun exports

	IRR	Robust SE	p value
State gun laws			
Discretionary purchase permits	0.24	0.10	.001
Purchase permits with fingerprinting	0.55	0.15	.02
Nondiscretionary permits	0.75	0.15	.15
Strong dealer regulation <sup>a</sup>	1.45	0.30	.07
Penalty for failure to conduct background checks	0.76	0.12	.07
Penalty for straw purchasers	1.46	0.30	.07
Junk guns banned	0.68	0.13	.04
Private sales regulated	0.71	0.11	.03
Firearm theft/loss reported	0.70	0.10	.02
One gun per month	0.81	0.26	.51
Covariates			
Household gun ownership	6.05	4.20	.009
Border population in states with strong gun laws <sup>b</sup>	1.00	1.82E-08	.50
Border population in states with medium gun laws <sup>c</sup>	1.00	2.57E-08	.14
Migration out of state	0.99	5.04E-07	.50
Borders Canada	0.68	0.065	<.001
Borders Mexico	0.84	0.19	.43

Note: IRR = incidence rate ratio. Model also includes state population offset term.

<sup>a</sup>States were considered to have strong dealer regulation if they require licensing of gun dealers, allow inspection of dealer records, and penalize dealers who falsify records.

<sup>b</sup>States were considered to have strong gun laws if they have a discretionary permit-to-purchase law.

<sup>c</sup>States were considered to have medium gun laws if they regulate private sales, require licensing of gun dealers, and allow inspections of dealer records.

discretionary PTP laws (IRR=0.24, lowered risk 76%), nondiscretionary PTP laws requiring fingerprinting at a law enforcement agency (IRR=0.55, -45%), junk gun bans (IRR=0.68, -32%), regulation of private sales (IRR=0.71, -29%), and required reporting of firearm theft or loss by private gun owners (IRR=0.70, -30%) were each associated with statistically significantly lower rates of crime gun exports. Effects for penalties for gun dealers' failure to conduct background checks (IRR=0.76) and penalties for straw purchases (IRR=1.24) approached statistical significance at the .05 level but in opposite directions. Although billed as a deterrent to interstate gun trafficking, one-gun-per-month restrictions were unrelated to trafficking and neither were strong dealer regulations, penalties for failure to conduct background checks, or penalties for straw purchasing. Household gun ownership (IRR=6.05) was associated with higher crime gun export rates and bordering Canada was associated with lower crime gun exports (IRR=0.84). States bordering other states where gun laws are relatively strict was unrelated to the rate of exporting crime guns after controlling for gun sales laws and other factors.

## Conclusions and Policy Implications

Data presented here provide compelling evidence that the repeal of Missouri's permit-to-purchase (PTP) law increased the diversion of guns to criminals. The timing of the effects on our indicator of diversion, short intervals between sales, and recovery in crime was in exact correspondence with the timing of the law's repeal. The changes observed in gun diversions in Missouri are likely related to the substantial change in how guns were sold following the law's repeal. Prospective purchasers of handguns being sold by private individuals no longer had to pass a background check and sellers were no longer required to document the sale. Prospective purchasers, including illegal straw purchasers, interested in buying handguns from licensed dealers applied to purchase the gun at the place that profited from the sale rather than at a law enforcement agency. Repealing the PTP law made it less risky for criminals, straw purchasers, and persons willing to sell guns to criminals and to their intermediaries, and these individuals appear to have taken advantage of the opportunities afforded to them by the repeal.

In our study of state gun sales laws in the 48 contiguous states, discretionary PTP laws were the most dramatic deterrent to interstate gun trafficking. This finding is consistent with prior research showing a negative association

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between these laws and intrastate diversion of guns to criminals; however, the effects were either mediated by or explained by lower levels of gun ownership in states with these laws (Webster, Vernick, and Bulzachelli 2009). Discretionary permitting procedures such as in-depth and direct scrutiny by law enforcement, longer waiting times, higher fees, and stricter standards for legal ownership may depress gun ownership and reduce opportunities for criminals to find individuals who have guns that they would be willing to sell or who would be targets for gun theft. The strong negative association between nondiscretionary PTP laws and exporting guns to criminals in other states after statistically controlling for gun ownership levels, geography, and other gun laws suggests that PTP laws deter gun trafficking.

Perhaps most relevant to current debates about federal gun policy, we found that states which regulated all handgun sales by requiring background checks and record keeping, not just those made by licensed dealers, diverted significantly fewer guns to criminals in other states. This finding is consistent with the results of a prior study of intrastate diversions of guns to criminals (Webster, Vernick, and Bulzachelli 2009) and the findings of an observational study of sales practices gun shows (Wintemute 2007; chap. 7 in this volume). The importance of fixing this flaw in current gun law is highlighted by data first reported here which indicate that nearly 80% of handgun offenders incarcerated in state prisons reported purchasing or trading for their handgun from an unlicensed seller who, in most states, was not legally obligated to ensure that the purchaser passed a background check or to keep a record of the transaction.

Our examination of state firearms regulations and the interstate diversion of guns to criminals considered a larger array of laws than prior studies. Laws requiring private gun owners to promptly report theft or loss of firearms to police are intended to increase private gun seller accountability and provide law enforcement with a tool to combat illegal straw purchases when such purchasers accept no responsibility for the gun being in the hands of a prohibited person with dubious claims of unreported gun theft. Having this measure of accountability significantly reduced interstate gun trafficking, as did bans of junk guns. Junk guns are the least expensive guns, and their low price enables traffickers to invest relatively little money in guns that can sell for nearly five times more than retail prices on the streets in states with the most restrictive gun laws. Prior research on the effects of Maryland's ban of junk guns found the banned guns used much less in Baltimore, Maryland, than in cities with-



out such bans, seven years after Maryland's law was enacted (Vernick, Webster, and Hepburn 1999), and gun homicides were 9% lower than projected had the law not been enacted (Webster, Vernick, and Hepburn 2002).

Interestingly, a policy designed specifically to deter interstate gun trafficking—one-gun-per-month limits for gun buyers—was not associated with the export of guns to criminals in other states. Strong gun dealer regulations were also unrelated to exporting of crime guns across state lines. A prior study of intra-state trafficking found that strong dealer regulations by themselves were not effective unless law enforcement reported that they had a policy of regular compliance inspections. Unfortunately, we had no measure of enforcement for the current study.

Our assessment of the effects of state gun control laws on the export of guns to criminals in other states had several limitations. First, the cross-sectional study design precludes an assessment of whether changes in gun control laws prompt subsequent changes in crime gun exports. Longitudinal crime gun trace data could not be obtained, as many of the state laws of interest were in place before crime gun tracing became common practice. The sharp increase in diversions of guns to criminals following the repeal of Missouri's law, however, lessens this concern. Second, our outcome data does not include all crime gun exports. Not all crime guns are submitted to the ATF for tracing. In 2009, gun traces could not be completed for nearly 40% of crime guns due to insufficient or incorrect data. Third, although reducing the diversion of guns to criminals is a key objective of some gun control laws, there is currently insufficient research to discern the degree to which reductions in diverted guns affects gun violence, and it appears as though some have had no impact.

In spite of these limitations, our study is the first to estimate independent associations between a number of state gun control laws and crime gun export rates while controlling for confounders, and it is the first longitudinal assessment of the impact of permit-to-purchase licensing that regulates all handgun sales. Our findings on cross-state diversions of crime guns underscores the importance of having more comprehensive federal regulation of firearm sales because lax laws in many states facilitate the arming of criminals beyond state borders. At a minimum, federal law should require background checks and record keeping for all firearms sales. Regulating many private sellers is a challenge, yet the data suggest that it is necessary to deter the diversion of guns to criminals, and requiring gun owners to report theft or loss of firearms provides additional accountability to prevent illegal sales.

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#### ACKNOWLEDGMENTS

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#### NOTES

1. **Licensing of gun dealers, inspection of dealer records allowed, and criminal penalties for dealers who falsified records.**
2. **PTP laws or in the District of Columbia with what could be considered a ban on firearm ownership until 2008.**
3. **Regulate private sales, require licensing of gun dealers, and allow inspections of dealer records.**
4. The number of people who moved out of each state between 2005 and 2009.

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**“The rate of firearms homicides in America is 20 times higher than it is in other economically advanced nations. We have got to change that.”**

**—From the Foreword by Michael R. Bloomberg, Mayor of New York City**

**“Gun violence is a public health issue. This isn’t about ideology. It’s about human dignity.”**

**—Martin O’Malley, Governor of Maryland**

The staggering toll of gun violence—which claims 31,000 U.S. lives each year—is an urgent public health issue that demands an effective evidence-based policy response.

The Johns Hopkins University convened more than 20 of the world’s leading experts on gun violence and policy to summarize relevant research and recommend policies that are both constitutional and have broad public support. Collected for the first time in one volume, this reliable, empirical research and legal analysis will help lawmakers, opinion leaders, and concerned citizens identify policy changes to address mass shootings, along with the less-publicized gun violence that takes an average of 80 lives every day.

Selected recommendations include:

- **Background checks:** Establish a universal background check system for all persons purchasing a firearm from any seller.
- **High-risk individuals:** Expand the set of conditions that disqualify an individual from legally purchasing a firearm.
- **Mental health:** Focus federal restrictions on gun purchases by persons with serious mental illness on the dangerousness of the individual.
- **Trafficking and dealer licensing:** Appoint a permanent director to ATF and provide

the agency with the authority to develop a range of sanctions for gun dealers who violate gun sales or other laws.

- **Personalized guns:** Provide financial incentives to states to mandate childproof or personalized guns.
- **Assault weapons and high-capacity magazines:** Ban the future sale of assault weapons and the future sale and possession of large-capacity ammunition magazines.
- **Research funds:** Provide adequate federal funds to the Centers for Disease Control and Prevention, National Institutes of Health, and National Institute of Justice for research into the causes and solutions of gun violence.

The book includes an analysis of the constitutionality of many recommended policies and data from a national public opinion poll that reflect support among the majority of Americans—including gun owners—for stronger gun policies.

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## **Declaration Exhibit 4**



## RESEARCH AND PRACTICE

# Association Between Connecticut's Permit-to-Purchase Handgun Law and Homicides

Kara E. Rudolph, PhD, MPH, MHS, Elizabeth A. Stuart, PhD, Jon S. Vernick, JD, and Daniel W. Webster, ScD, MPH

Homicide was the second leading cause of death for individuals aged 15 to 34 years in the United States from 1999 to 2011<sup>1</sup> and the second leading contributor to racial disparities in premature mortality among men.<sup>2</sup> Firearms are used in more than two thirds of homicides in the United States,<sup>3</sup> and firearm availability, especially to high-risk groups (e.g., perpetrators of domestic violence and violent misdemeanors),<sup>4,5</sup> is positively associated with homicide risks.<sup>6,7</sup>

Given the importance of firearms in lethal violence, many federal and state policies have been designed to prevent individuals with a history of violence, criminal behavior, substance abuse, or serious mental illness from accessing firearms. Federal law mandates that individuals who purchase firearms from federally licensed dealers pass a background check, but sales by private, unlicensed sellers are exempt. Eighteen states and the District of Columbia require handgun purchasers from private, unlicensed sellers to pass background checks. Ten of these states and the District of Columbia strengthen the background check requirement with a permit-to-purchase (PTP) law, although 4 do not require a new background check at the time of purchase.<sup>8</sup> PTP laws require individuals to obtain a permit or license to purchase a handgun (from both licensed retail dealers and private sellers) that is contingent upon passing a background check and, in some cases, completing safety training. In 8 states, individuals must apply for a PTP in person at the law enforcement agency that initiates the background checks and issues permits. In the other 42 states, pre-gun-sale background checks are initiated through a licensed gun dealer, although there are significant differences among these policies. Table A (available as a supplement to this article at <http://www.ajph.org>) summarizes the status of these laws by state.

We conducted this study to estimate the impact of Connecticut's 1995 PTP law. This

**Objectives.** We sought to estimate the effect of Connecticut's implementation of a handgun permit-to-purchase law in October 1995 on subsequent homicides.

**Methods.** Using the synthetic control method, we compared Connecticut's homicide rates after the law's implementation to rates we would have expected had the law not been implemented. To estimate the counterfactual, we used longitudinal data from a weighted combination of comparison states identified based on the ability of their prelaw homicide trends and covariates to predict prelaw homicide trends in Connecticut.

**Results.** We estimated that the law was associated with a 40% reduction in Connecticut's firearm homicide rates during the first 10 years that the law was in place. By contrast, there was no evidence for a reduction in nonfirearm homicides.

**Conclusions.** Consistent with prior research, this study demonstrated that Connecticut's handgun permit-to-purchase law was associated with a subsequent reduction in homicide rates. As would be expected if the law drove the reduction, the policy's effects were only evident for homicides committed with firearms. (*Am J Public Health.* 2015;105:e49–e54. doi:10.2105/AJPH.2015.302703)

law strengthened background check requirements, especially for handguns purchased by private sellers. In addition, it raised the handgun purchasing age from 18 to 21 years and required any prospective handgun purchaser to apply for a permit in person with the local police and complete at least 8 hours of approved handgun safety training.

## METHODS

To estimate the effect of Connecticut's PTP law on homicides, we compared Connecticut's homicide rates observed after the law's implementation to the rates we would have expected had the law not been implemented (the counterfactual). To estimate the counterfactual, we used longitudinal data from a weighted combination of comparison states with no PTP law change (henceforth, Connecticut's synthetic control) identified based on the ability of their prelaw homicide trends and covariates to predict prelaw homicide trends in Connecticut.

States that were considered as potential comparison states for Connecticut were those that did not have a PTP law in 1995 and

therefore were "at risk" for implementing a new PTP law in 1995. Ten states (Hawaii, Illinois, Iowa, Missouri, Massachusetts, Michigan, Nebraska, New Jersey, New York, and North Carolina) and the District of Columbia were excluded from the pool of possible controls because they implemented a PTP law prior to 1995. We used outcome and annual covariate data from Connecticut and each of the 39 states in the control pool from 1984 to 2005. We concluded the postlaw period in 2005 to limit counterfactual predictions to 10 years, as has been done previously.<sup>9</sup>

## Outcomes

We examined 2 outcomes—firearm-specific homicide rates and non-firearm-specific homicide rates (number of homicides per 100 000 state residents)—obtained from compressed mortality data from the Centers for Disease Control and Prevention's Wide-ranging Online Data for Epidemiologic Research database (<http://wonder.cdc.gov/mortSQL.html>). We expected the impact of the PTP law—if any—to be limited to homicides committed with firearms.

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**Covariates**

Annually measured state-level covariates and their sources follow. Population size, population density (log-transformed), proportion aged 0 to 18 years, proportion aged 15 to 24 years, proportion Black (log-transformed), proportion Hispanic (log-transformed), proportion aged 16 years or older living at or below poverty, and income inequality as measured by the Gini coefficient were from the US Census Bureau. Average per capita individual income and number of jobs per adult were from the Bureau of Economic Analysis. Proportion living in metropolitan statistical areas, law enforcement officers per 100 000 residents, and robberies per 100 000 residents were from the Federal Bureau of Investigation's Crime in the United States publications. The Census of Governments provided data on annual expenditures for law enforcement (current operation and capital outlay).

**Statistical Analysis**

We used the synthetic control group approach<sup>9</sup> to create a weighted combination of states that exhibited homicide trends most similar to Connecticut's prior to the law's implementation (1984–1994). This weighted combination of states can be thought of as a “synthetic” Connecticut, whose homicide trends during the postlaw period predict the post-1995 trends that Connecticut would have experienced in the absence of the law change.

The algorithm for creating the weights has been described previously.<sup>9</sup> The vector of weights minimized the mean squared prediction error (MSPE) between the homicide rates of Connecticut during the prelaw period and the weighted vector of outcomes and covariates of the control pool states during the prelaw period.<sup>9</sup> No data from 1995 or thereafter were used in creating the weights and synthetic control.

After creating the weights using the Synth package in R,<sup>10</sup> we compared homicide rates between Connecticut and its synthetic control in the 10 years after the PTP law was implemented (from 1996 to 2005). We excluded 1995 because the law was not implemented until October of that year. We excluded 2001 from the nonfirearm homicide analysis because of the large increase in deaths attributable to the 2001 terrorist attacks, which had

a disproportionate impact on Connecticut residents. The estimated number of homicides prevented by the law from 1996 to 2005 was calculated by multiplying the difference in homicide rates between Connecticut and its synthetic control by Connecticut's population size (in 100 000s) each year and summing across the years.

Statistical significance was assessed using a permutation-based test—also called a placebo or falsification test—that is similar to the Fisher exact test.<sup>9,11</sup> For each outcome, we repeated the analysis where we considered each of the 39 states in the control pool as the “treated” state and created a synthetic control for each of these states. We calculated the proportion of control states with an estimated rate of prevented homicides that was as extreme as or more extreme than the estimated rate prevented for Connecticut. This proportion was akin to the *P* value and indicated how unusual Connecticut's estimated effect was compared with the states in the control pool.

However, not every control state's homicide trend can be well approximated by a synthetic control. Lack of fit was determined by greater MSPE, which is the average of the squared differences between homicide rates in the “treated” state and its synthetic control during the prelaw period. In cases of large MSPE, it is not appropriate to use the synthetic control as a comparison. Consequently, we calculated the proportions of control states with results as extreme or more extreme than Connecticut for 3 separate control pools, including control

states whose MSPE from their synthetic control was no more than (1) 20×, (2) 5×, and (3) 2× that of Connecticut's synthetic control MSPE. This entire analysis process was conducted twice: once for firearm homicides and once for nonfirearm homicides. We used R version 3.0.2 for all analyses.<sup>12</sup>

**Sensitivity Analysis**

In the data available as a supplement to the online version of this article, we considered an alternative approach in which we compared Connecticut's homicide rate trends to the 39 control states' average trends that were mean-shifted to the scale of Connecticut's homicide rates.

**RESULTS**

Using the predictive covariates as well as prelaw outcome data, we constructed a synthetic control for Connecticut for each of the 2 outcomes of interest. States with a nonzero weight contributed to the synthetic control and are listed in Table 1. Table 1 also shows how well the synthetic control approximated Connecticut's homicide rates during the prelaw period, as measured by MSPE. The last row of this table shows that the synthetic control was a better fit than a simple average of all the states in the control pool. For example, in the case of firearm homicides, the synthetic control had an MSPE of 0.157, which is an order of magnitude less than the MSPE if a simple average of all control states had been used.

**TABLE 1—States With Nonzero Weights in the Synthetic Connecticut for Firearm and Nonfirearm Homicide Rates: 1996–2005**

State	Weight	
	Firearm Homicides	Nonfirearm Homicides
California	0.036	0.000
Maryland	0.147	0.110
Nevada	0.087	0.121
New Hampshire	0.005	0.724
Rhode Island	0.724	0.046
MSPE synthetic control/all control states	0.157/1.633	0.090/0.740

*Note.* MSPE = mean squared prediction error. Thirty-nine states were included in the pool of possible controls. Ten states with a similar law implemented prior to 1995 were not included: Hawaii, Illinois, Iowa, Missouri, Massachusetts, Michigan, Nebraska, New Jersey, New York, and North Carolina.

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Table B (available as a supplement to this article at <http://www.ajph.org>) shows descriptive statistics for each of the covariates found to be predictive of homicide rates during the prelaw period. These variable summaries are provided for Connecticut, the pool of control states, and Connecticut's synthetic control optimized for (1) firearm and (2) nonfirearm homicides.

Figures 1 and 2 compare firearm and nonfirearm homicide rates over time between Connecticut and its synthetic control. The average homicide rates over the study period for all states in the control pool are included for reference. Figure 1 shows that firearm homicide rates for Connecticut and its synthetic control tracked together prior to the law's implementation in October 1995; this is also evidenced by the low MSPE shown in Table 1. However, beginning in 1999, the rates diverged markedly. Connecticut's firearm homicide rate continued to decline before leveling off in the early 2000s, whereas its synthetic

control's firearm homicide rate leveled off approximately 5 years earlier. Summing the differences between Connecticut and its synthetic control from 1996 to 2005, we estimated the law to be associated with 296 fewer firearm homicides during this period, a reduction of 40% relative to the counterfactual.

The permutation tests were consistent with this graphical intuition and indicated that Connecticut's divergent firearm homicide trend during the postlaw period was statistically significant. None of the 30 potential control states with an MSPE no more than 5× that of Connecticut's had firearm homicide trends that diverged as widely from their synthetic controls as Connecticut's did (Table 2).

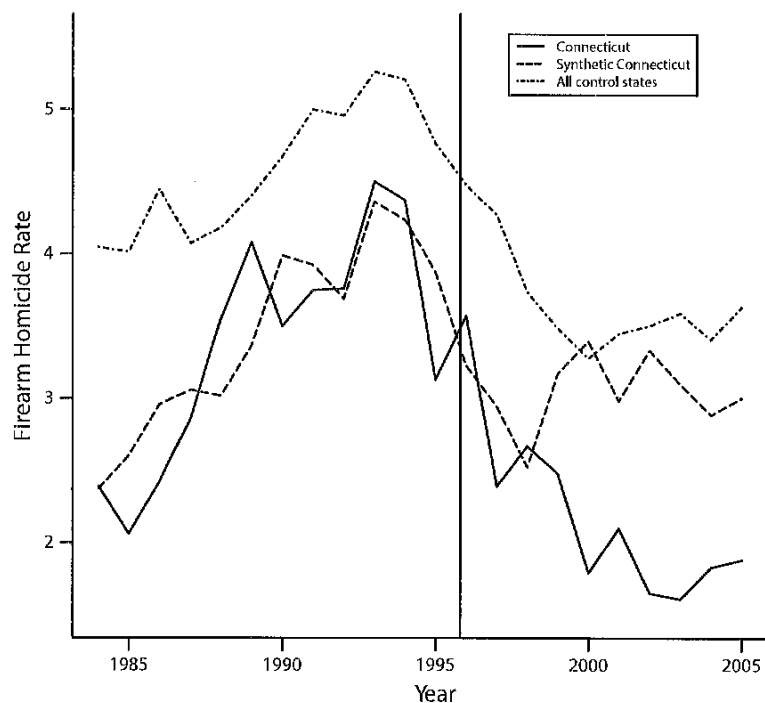
Figure 2 shows nonfirearm homicide rates in Connecticut compared with its synthetic control and with all states in the control pool. Connecticut's nonfirearm homicide rate trend tracked closely with that of its synthetic control's prior to the PTP law's implementation. However, the nonfirearm homicide rates for

Connecticut and its synthetic control did not diverge following the law's implementation. Summing the differences between Connecticut and its synthetic control from 1996 to 2005, we estimated that the law was associated with 24 fewer nonfirearm homicides during this period than expected. The permutation tests indicated that any divergence between Connecticut's nonfirearm homicide rates and those of its synthetic control during the postlaw period was not statistically significant (Table 2).

## DISCUSSION

Previous studies have suggested that PTP laws may prevent the diversion of guns to criminals,<sup>13–15</sup> and the sharp increase in gun homicides after Missouri's PTP law was repealed suggests that PTP laws may reduce lethal violence.<sup>16</sup> Consistent with these previous studies, this study demonstrated that Connecticut's PTP law was associated with a subsequent reduction in homicide rates. As would be expected if the PTP law drove the reduction, the effects were only seen for homicides committed with firearms.

Connecticut's firearm homicide rate trend departed from its synthetic control from 1999 to 2005. This lag between the law's implementation and divergence in homicide trend may call into question whether the estimated effect resulted from the PTP law or from unmeasured interventions enacted in 1999 that only selectively reduced firearm homicides. However, there are plausible explanations for a delayed policy effect. First, spikes in gun sales may occur just prior to a significant gun control law, perhaps because of media scrutiny, and the additional guns sold under less rigorous regulation could temporarily counteract the law's preventive effects.<sup>17,18</sup> Second, the number of transactions blocked by the PTP law may accumulate over time until gun availability in the underground market is sufficiently constrained to appreciatively affect handgun acquisition. The net effect of these 2 opposing forces—prelaw sales uptick and postlaw downturn—may result in no immediate effect but fewer high-risk gun acquisitions several years after implementation. Such a delayed effect was observed following Maryland's ban of small, poorly constructed handguns that were overrepresented in crime.<sup>18</sup>



Note. Connecticut (solid line) compared with synthetic Connecticut (dashed line) and all states in the control pool, equally weighted (dotted dashed line). The vertical line indicates when Connecticut's permit-to-purchase law was implemented.

FIGURE 1—Firearm homicide rates: Connecticut, 1996–2005.

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Note. Connecticut (solid line) compared with synthetic Connecticut (dashed line) and all states in the control pool, equally weighted (dotted dashed line). The vertical line indicates when Connecticut's permit-to-purchase law was implemented. Rates for 2001 are not included because of the World Trade Center attacks.

FIGURE 2—Nonfirearm homicide rates: Connecticut, 1996–2005.

It is plausible that Connecticut's PTP law could reduce firearm homicide rates as substantially as the 40% reduction estimated. The PTP law (1) strengthened background check requirements for handguns sold by private sellers and licensed firearm dealers, (2) required completion of an approved handgun safety course of at least 8 hours, and (3) increased the minimum legal age for handgun purchase from 18 to 21 years, blocking an age group with a high homicide offending rate.<sup>19</sup> Since 1965, Connecticut law has required private handgun sellers to mail a form to local police with information on prospective handgun purchasers to allow for—but not mandate—a background check with a 1-week waiting period. Local authorities with knowledge of a prospective purchaser's ineligibility to possess a handgun were required to notify the seller. This law was strengthened in October 1994 to require local law enforcement to "make a reasonable effort" to determine whether an applicant was ineligible to own a handgun

(Connecticut Public Act No. 94-1 [July Special Session 1994], Section 1[b]); in October 1995, it was further strengthened by the PTP law, which requires prospective handgun purchasers to obtain an eligibility certificate through their local police department. The implementation of the PTP law also changed the process for purchasing handguns from licensed firearm dealers—previously, handgun purchasers could apply for a permit directly from a gun shop. After the PTP law, if the applicant passed a background check and showed proof of successful completion of an approved handgun safety course, then a permit was issued that would be valid for 5 years. Requiring application in person at the police department as well as the safety course may dissuade potential straw purchasers (those who buy guns for prohibited persons) or others considering purchasing handguns to commit a crime.

The law's protective effects against homicides may be mediated by reductions in the

diversion of guns to criminals. These diversions are indirectly measured from traces of guns recovered by police such as crime guns that come across state borders and have short sale-to-crime intervals.<sup>20</sup> Unfortunately, reliable crime gun trace data do not extend to the prelaw period, so we could not test this hypothesis. Current crime gun trace indicators suggest that Connecticut is performing better than the national average in terms of gun diversions. The average sale-to-crime interval for guns recovered by police in Connecticut is more than 2.5 years longer than the national average.<sup>21</sup> Almost half of the guns recovered by police in Connecticut originated from retail sales in other states, approximately 15% higher than the national average.<sup>21</sup>

Estimating state law effects requires estimating the counterfactual—the outcome had the law not been implemented but all else remained equal. This is typically done by comparing outcomes over time between states with the law and states without the law. The synthetic control method used in this study was appropriate for the comparative case study design and was related to the difference-in-differences approach to estimating intervention effects.<sup>9</sup> This method has gained popularity recently in estimating economic and health policy effects.<sup>9,22–25</sup> The advantages of this approach and its assumptions have been discussed previously.<sup>26</sup>

The first assumption of the synthetic control approach is that there were no interruptions in the law and no effects prior to its implementation. There was no evidence that the law's implementation was interrupted. However, as

TABLE 2—Proportion of Control States With Results as Extreme as or More Extreme Than Connecticut: 1996–2005

Control States Included <sup>a</sup>	Firearm	Nonfirearm
≤ 20× MSPE	3/38	13/39
≤ 5× MSPE	0/30	11/32
≤ 2× MSPE	0/24	8/26

Note. MSPE = mean squared prediction error.

<sup>a</sup>Results from permutation tests including control states whose synthetic control's MSPE is ≤ 20×, 5×, and 2× that of the MSPE of Connecticut's synthetic control.



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stated previously, it is plausible that more handguns were purchased just prior to the PTP law's implementation.

The second assumption is that the implementation of the PTP law has no effect on other states' homicide rates. If this assumption was violated in this study, there is no appealing strategy for relaxing it. One approach would be to restrict the analysis to states that are not geographically close to Connecticut. The drawback of this strategy is that states such as Rhode Island and New Hampshire, which were large contributors to Connecticut's synthetic control, would be excluded.

The third assumption is that there are no unmeasured confounders during the postlaw period. This is a concern in any study with nonrandom assignment to intervention status. However, the synthetic control provided a good fit to Connecticut's homicide rates during the prelaw period, and intrastate correlation of homicide rates from 1984 to 2005 was very high, ranging from 0.84 to 0.97. Thus, a synthetic control that fits well during the prelaw period is likely to provide a good fit during the postlaw period as well.

Connecticut passed 2 gun laws of note in the poststudy period. In 1998, Connecticut began prohibiting firearm possession for persons who committed serious offenses adjudicated in juvenile courts. However, this condition affected a very small segment of gun offenders who were not already prohibited, and there is no evidence that these policies affected homicide rates.<sup>27</sup> In 1999, Connecticut began requiring background checks for private transfers of long guns. However, long guns accounted for a small percentage of the firearms used in murders in Connecticut during the study period prior to 1999.<sup>28</sup>

Rhode Island, which contributed most to the firearm homicide synthetic control (72%), did not adopt a significant gun law during the postlaw study period. Maryland, which accounted for 14% of the firearm homicide synthetic control, implemented a law in October 1996 that required background checks for all handgun transfers. This law, in addition to a 1990 ban of "junk guns," may have reduced firearm homicides in Maryland.<sup>18</sup> California contributed less than 5% of the firearm homicide synthetic control and was active in adopting stricter gun control laws throughout the study period, the most significant of which

were comprehensive background checks for handgun transfers and 10-year firearm prohibitions for violent misdemeanants. Both were implemented in 1991. Any protective effects of firearm laws in Maryland and California that were realized after 1995 may have biased our estimates of the impact of Connecticut's PTP law on firearm homicide rates toward the null. Successful interventions in major jurisdictions in the states included in the synthetic control could have confounded our estimates. However, we are unaware of any intervention that affected firearm homicides enough to have affected statewide rates over a 7-year period.

Fixed effects regression models are a common way of estimating the effects of state laws while also controlling for variables that may have potentially confounded this estimate. We believed this approach to be inappropriate in this case for several reasons. First, it relied on questionable assumptions that all states and time periods could have implemented a PTP law and that the association between PTP law implementation and homicide rates would be the same for all states. We had very little data with which to evaluate these assumptions, because only one other state implemented a PTP law during the study period. (Nebraska implemented a PTP law in 1991 that differed in important ways from Connecticut's.) In addition, fixed effects regression models failed to recognize the comparative case study design of both the data and research question and would have inappropriately extrapolated the effect estimated for Connecticut to the pool of control states.

The goal of this study was to estimate the effect of Connecticut's PTP law on homicides in Connecticut—not to extrapolate the effect of Connecticut's law on homicides to an average control state. The synthetic control approach allowed us to estimate such an effect and appropriately restricted the interpretation to the state of Connecticut. In addition, the method of assessing significance of the estimated results was more appropriate than a large-sample inferential technique, such as regression, given the small number of units.<sup>9</sup> Other advantages of this method over standard regression methods included (1) the data-driven estimation of policy effects (through the synthetic control weights) to produce the most accurate counterfactual and (2) the

incorporation of both graphical and numerical checks (through the MSPE) of how well the comparison approximated the case.

Examining the extent to which stronger background check policies affect suicide rates is an area for future work. Previous research suggests that states with stricter gun permitting and licensing regulations have lower suicide rates.<sup>29</sup> This research should be corroborated with studies that use longitudinal data to examine changes in PTP laws and subsequent changes in firearm suicide rates.

This study has important policy implications as lawmakers consider options for reducing gun violence. Connecticut's PTP law seems to reduce firearm-specific homicides. Following the process in place in 6 states now, the most recent federal legislation considered by Congress to require background checks for many private party transactions would require prospective purchasers to go to a federally licensed gun dealer who would process the purchase application and submit the information for the background check. Future research should compare the effectiveness of this approach versus the approach used in PTP laws. Other unexamined issues include standards of evidence to hold noncompliant gun sellers accountable and the significance of penalties for failing to comply with gun sales laws. ■

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## Contributors

K. E. Rudolph contributed to the study design and interpretation of results and led the analysis, drafting, and revision of the article. E. A. Stuart contributed to the study design, analysis, interpretation of results, and article revisions. J. S. Vernick contributed to obtaining the data, interpreting the results, and revising the article. D. W. Webster conceptualized the study and contributed to obtaining the data, interpreting the results, and drafting and revising the article.

## RESEARCH AND PRACTICE

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## Human Participant Protection

This study was determined not to be human participant research by the institutional review board at the Johns Hopkins Bloomberg School of Public Health.

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## **Declaration Exhibit 5**



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## Effects of the Repeal of Missouri's Handgun Purchaser Licensing Law on Homicides

Daniel Webster, Cassandra Kercher Crifasi, and  
Jon S. Vernick

**ABSTRACT** *In the USA, homicide is a leading cause of death for young males and a major cause of racial disparities in life expectancy for men. There are intense debate and little rigorous research on the effects of firearm sales regulation on homicides. This study estimates the impact of Missouri's 2007 repeal of its permit-to-purchase (PTP) handgun law on states' homicide rates and controls for changes in poverty, unemployment, crime, incarceration, policing levels, and other policies that could potentially affect homicides. Using death certificate data available through 2010, the repeal of Missouri's PTP law was associated with an increase in annual firearm homicide rates of 1.09 per 100,000 (+23 %) but was unrelated to changes in non-firearm homicide rates. Using Uniform Crime Reporting data from police through 2012, the law's repeal was associated with increased annual murders rates of 0.93 per 100,000 (+16 %). These estimated effects translate to increases of between 55 and 63 homicides per year in Missouri.*

**KEYWORDS** *firearm policy, firearm violence, gun policy, gun violence*

### INTRODUCTION

Homicide is the second leading cause of death for people aged 15–34 years in the USA and the leading cause of death for black males in this age group.<sup>1</sup> Homicide also accounts for 5 % of the Years of Potential Life Lost (YPLL) in the USA<sup>2</sup> and is the second leading cause of the racial disparity in life expectancy between black and white males.<sup>3</sup> Two-thirds of all homicides in the USA are committed with firearms,<sup>1</sup> and the firearm homicide rate in the USA is 19.5 times higher than the average firearm homicide rate in other high-income countries.<sup>4</sup>

It has been argued that weaknesses in federal and state firearms laws contribute to the unusually high homicide rate in the USA, especially the lack of background checks or record-keeping requirements for private, unlicensed sellers of firearms.<sup>5</sup> Many perpetrators of homicide have backgrounds that would prohibit them from possessing firearms as a result of prior convictions for felony crimes<sup>6</sup> or for misdemeanors involving domestic violence, being under a restraining order for domestic violence, young age, or other disqualifications.<sup>7</sup> Federal law requires background checks and record keeping for sales by federally licensed firearms

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dealers but exempts these regulations when the firearm seller is unlicensed. Fifteen states require individuals purchasing handguns from unlicensed sellers to pass background checks, and eleven of these states require all handgun purchasers to acquire a permit-to-purchase (PTP) license.

PTP systems require prospective handgun purchasers to obtain a license verifying that they have passed a background check. All handgun sellers, both licensed dealers and private sellers, may only sell to those with a current PTP license. Most states with PTP handgun licensing require applicants to apply for the license directly at a law enforcement agency. In all other states, individuals wishing to purchase a handgun from a licensed dealer must complete a purchase application form. The dealer or dealer's employee submits the form to the Federal Bureau of Investigation's (FBI) National Instant Check System (NICS) or, in some cases, to state police, to determine whether the applicant is prohibited from possessing firearms.

Prior research has shown that cities and states that require background checks and record keeping for handgun sales by unlicensed sellers and stricter PTP handgun licensing laws have lower levels of guns being diverted to criminals within a year of retail sale<sup>8</sup> and fewer guns exported to criminals across state borders.<sup>9</sup> A recent study found a cross-sectional association between states having PTP handgun licensing or other forms of universal background check requirements for gun sales and lower homicide rates.<sup>10</sup>

Missouri repealed its PTP handgun licensing law effective August 28, 2007. Missouri's law had been in place since 1921 and required all handgun purchasers to have a valid PTP license (good for 30 days) in order to lawfully purchase a handgun from any seller, licensed or unlicensed. Applicants applied in person at their local sheriff's office which facilitated the background check. Webster and colleagues<sup>8</sup> reported that immediately following the repeal of Missouri's PTP handgun law, there was a twofold increase in the percentage of guns that had unusually short intervals between the retail sale and the recovery by police, an indicator of firearm diversion or trafficking.<sup>11, 12</sup> The repeal also coincided with a sharp increase in the percentage of crime guns recovered by police in Missouri that had been originally sold by in-state retailers, from 56.4 % in 2006 to 71.8 % in 2012.<sup>13</sup>

This study examines the effects of the repeal of Missouri's PTP handgun licensing law on homicide rates. Because this change eliminated mandatory background checks for handguns sold by unlicensed sellers, it is of particular relevance for debates in the US Congress and in several states about proposals to extend background check requirements to all firearm sales.

## METHODS

### Design

The association between the repeal of Missouri's PTP handgun licensing law on homicide rates was estimated using a quasi-experimental research design with annual, state-level homicide rates. Homicide rates were age adjusted and stratified by those committed with a firearm versus all other methods to discern the specificity of the effects of the policy change on firearm versus non-firearm homicides.

### Data and Measures

We hypothesized that the policy change would affect homicide rates but only those committed with firearms. Thus, the primary outcome measure was state-level annual

firearm homicide rates, derived from death certificate and census data, age adjusted (reference year 2000) in Centers for Disease Control and Prevention's (CDC) Web-based Injury Statistics Query and Reporting System (WISQARS) Fatal Injury Reports.<sup>14</sup> Seven states (HI, ME, NH, ND, SD, VT, and WY) were dropped from the analyses because WISQARS suppressed the data for states and years for which there were very few firearm homicides to protect the anonymity of the data. Missouri's mean baseline rate of firearm homicides during the pre-repeal study years was approximately four to five times higher than was experienced in the seven dropped states, and none of the dropped states were geographically close to Missouri. Within Missouri, we also used county-level cause-of-death mortality data from CDC's Wide-ranging Online Data for Epidemiologic Research (WONDER) system<sup>15</sup> to assess the degree to which state-wide changes in age-adjusted homicide rates differed across counties.

These data from CDC's WISQARS and WONDER systems have the advantage of complete, mandatory reporting of death certificate data and the ability to easily isolate homicides committed with firearms versus other methods. The disadvantage of these data is that they were only available through the end of 2010 at the time of this study. We also collected and analyzed state-level data on annual rates of murder and non-negligent manslaughter (which will capture virtually all homicides) from the Federal Bureau of Investigation's (FBI) Uniform Crime Reporting (UCR) system. UCR data provided two additional years of post-PTP-law-repeal data; however, the FBI has to interpolate some data for states and years, when there is incomplete reporting from local law enforcement agencies, and rates are not age adjusted.

Although data from prior years are available, we chose 1999 as the beginning of our study period because the period 1999–2012 has been the most stable period for homicide trends in many decades. Periods of dramatic change, especially if the underlying causes for those changes cannot be easily modeled, are vulnerable to omitted variable bias in estimates of policy impact.<sup>16</sup>

Regression analyses are used to estimate policy change effects and controlled for changes in rates of unemployment, poverty, incarceration, burglary, law enforcement officers per capita, and the presence of four other types of state laws potentially most directly relevant to lethal violence for which there was significant change during the study period. These laws included so-called Stand Your Ground (SYG) laws, which give individuals an expanded right to use deadly force in potentially dangerous encounters with no duty to retreat, right-to-carry (RTC) laws which require law enforcement agencies to issue permits to carry concealed firearms to all legally qualified applicants, bans of unsafe handguns including so-called Saturday Night Specials, and firearm prohibitions for young adults resulting from convictions for serious crimes adjudicated in juvenile courts. SYG laws have been enacted in many states in recent years, including in Missouri in 2007. Prior research indicated that these laws may increase homicides.<sup>17</sup> Early research suggested that RTC laws may reduce homicides,<sup>18</sup> but the most rigorous studies show no evidence that RTC laws affect homicide rates.<sup>19, 20</sup> Maryland's adoption of a SNS ban was associated with a reduction in firearm homicide rates,<sup>21</sup> but this policy has not been rigorously studied in other states nor has firearm prohibitions stemming from serious juvenile offenses.

Average annual unemployment rates (per 100 population 16 years of age and older) were obtained from the Bureau of Labor Statistics.<sup>22</sup> Poverty rates (per 100 population) were obtained from the Census Bureau's Current Population Survey.<sup>23</sup> Burglary rates (per 100,000 population)—an indicator of crime rates that should not

be directly affected by gun laws—and the rates of law enforcement officers (per 100,000 population) were drawn from the FBI's UCR program.<sup>24</sup> Incarceration rates (per 100,000 population) are from the Sourcebook of Criminal Justice Statistics.<sup>25</sup> The repeal of Missouri's PTP handgun licensing law was measured as the proportion of days in a year when the state had no PTP handgun law, i.e., 0 for the years the PTP law was in place (1999–2006), 0.263 in 2007, and 1 for 2008–2012.

### Analytic Methods

Pre-repeal versus post-repeal differences in mean age-adjusted homicide rates were tested for statistical significance using t-tests. To estimate the independent association between the repeal of Missouri's PTP handgun licensing law and age-adjusted homicide rates, we used generalized least squares regression models. The models included state- and year-fixed effects to control for baseline differences in states' homicide rates and yearly fluctuations that occurred nationally as well as changes in the covariates described above. Standard errors for model coefficients were adjusted to account for clustering by state and for heteroskedasticity using the Eikert–Huber–White adjustment.<sup>26</sup> Analyses were conducted using Stata IC v 11.0.<sup>27</sup>

### RESULTS

From 1999 to 2007, Missouri's firearm homicide rate was relatively stable, fluctuating around a mean of 4.66 per 100,000 population per year (Fig. 1). In 2008, at the first full year after the permit-to-purchase licensing law was repealed, the firearm homicide rate in Missouri increased sharply to 6.23 per 100,000, a 34 % increase from the baseline mean. For the post-repeal period of 2008–2010, the mean annual firearm homicide rate was 5.82, 24.9 % higher than the pre-repeal mean ( $t=4.38$ ,  $df=10$ ,  $p=.001$ ). Within Missouri, firearm homicide rates per 100,000 increased sharply between the pre- and post-repeal periods in each of the three large central metro counties/jurisdictions—by 30 % in Jackson County (11.2 to 14.7), 47 % in St. Louis County (5.0 to 7.4), 27 % in St. Louis City (21.7 to 27.5),

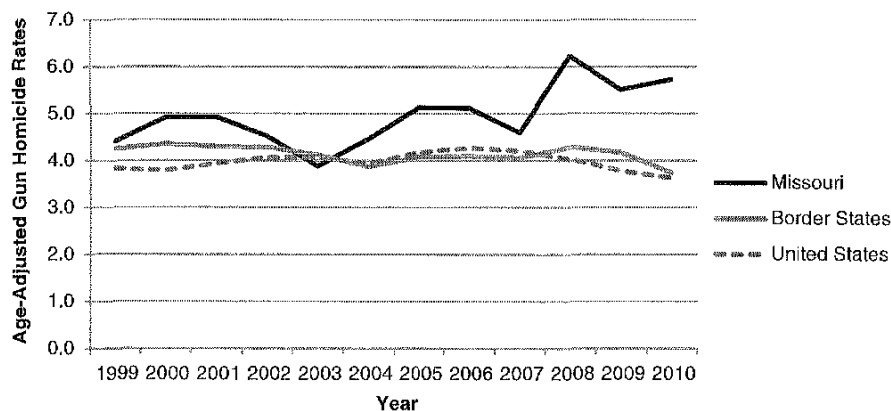


FIG. 1 Age-adjusted firearm homicide rates in Missouri, states bordering Missouri (population-weighted averages), and the USA, 1999–2010.

and 34 % overall in the nine Missouri counties designated as large metropolitan fringe counties (3.1 to 4.2).

This sharp increase in firearm homicide rates in Missouri beginning in 2008 was out of sync with changes during that period nationally and in states bordering Missouri (Table 1). The mean age-adjusted firearm homicide rate in the USA declined 5.5 % from 4.03 per 100,000 during 1999–2007 to 3.81 for 2008–2010. The population-weighted mean firearm homicide rates across the eight states bordering Missouri changed little between these two time periods (4.15 to 4.06, –2.2 %;  $p=.480$ , Fig. 1), and there were no statistically significant changes in any specific state that bordered Missouri.

Controlling only for baseline differences across states and year effects nationally (model 1, Table 2), the repeal of Missouri's PTP handgun licensing law was associated with an increase in firearm homicide rates of 1.32 per 100,000 ( $p<.001$ ), a 29.4 % increase above rates projected without the repeal. After controlling for changes in rates of unemployment, poverty, burglary, incarceration, and law enforcement officers along with other state laws, the estimated increase in annual firearm homicide rates associated with the repeal of Missouri's PTP handgun law was 1.09 per 100,000 population per year ( $p<.001$ ; 95 % confidence interval (CI) 0.81 to 1.38), a 23 % increase.

The increase in homicide rates following the repeal of Missouri's PTP handgun licensing law occurred only for homicides committed with firearms. Following similar trends nationally, Missouri's age-adjusted rate of non-firearm homicides declined from a pre-repeal (1999 to 2007) mean of 2.19 to a post-repeal (2008 to 2010) mean of 1.88 (–14 %). Regression analyses indicated that Missouri's repeal of its PTP handgun law was associated with no change in the age-adjusted non-firearm homicide rate ( $\beta=-0.077$ ,  $p=.446$ ) and an increase in annual homicide rates for all methods of 1.00 per 100,000 (Table 2,  $p<.001$ , 95 % CI 0.66 to 1.35).

**TABLE 1 Mean firearm homicide rates before (1999–2007) and after Missouri repealed its permit-to-purchase handgun licensing requirement for handgun sales by licensed and unlicensed sellers (2008–2010)**

	Mean before Missouri's PTP handgun law repealed 1999–2007	Mean after Missouri's PTP handgun law repealed 2008–2010	% Change	Probability 2 means are equal
Missouri	4.67	5.82	+24.9	.001
Population-weighted mean for states bordering Missouri	4.15	4.06	–2.2	.480
Arkansas	5.12	5.23	+2.1	.691
Illinois	5.10	4.77	–6.6	.335
Iowa	0.93	1.00	+7.8	.627
Kansas	3.95	3.85	–3.4	.757
Kentucky	3.26	3.29	+1.0	.898
Nebraska	1.75	2.28	+30.0	.096
Oklahoma	3.80	3.93	+3.5	.618
Tennessee	5.42	5.23	–3.5	.553

**TABLE 2** Estimates of effect of the repeal of Missouri's permit-to-purchase handgun law from generalized least squares regression models on states' age-adjusted firearm, non-firearm, and all-cause homicide rates, 1999–2010, and murder and non-negligent manslaughter rates, 1999–2012

Outcome variable	$\beta$	Robust S.E.	P value	95 % CI for $\beta$
Firearm homicide rates, 1999–2010 $R^2$ within = .208, $R^2$ overall = .948	1.09	0.14	<.001	0.81 to 1.38
Non-firearm homicide rates, 1999–2010 $R^2$ within = .162, $R^2$ overall = .583	–0.08	0.10	.446	–0.28 to 0.12
Total homicide rates, 1999–2010 $R^2$ within = .177, $R^2$ overall = .943	1.00	0.18	<.001	0.66 to 1.35
Murder and non-negligent manslaughter rates, 1999–2012 $R^2$ within = .183, $R^2$ overall = .908	0.93	0.23	<.001	0.48 to 1.38

All models controlled for rates of unemployment, poverty, burglary, incarceration, law enforcement officers, "Stand Your Ground" laws, right-to-carry laws, bans of Saturday night special (junk) handguns, and firearm prohibitions of young adults with prior serious criminal offenses adjudicated in juvenile courts. Estimates for each of these covariates can be found in the Supplemental Tables.

Using UCR data from police reports for 1999–2012, the difference in the annual murder rate in Missouri minus that of the U.S. as a whole grew from 0.60 per 100,000 population during the pre-PTP-repeal period to 1.82 during the 5 years after the repeal of the PTP law (data not shown,  $t=4.12$ ,  $df=12$ ,  $p<.001$ ). A model which only controlled for state- and year-fixed effects estimated a 1.34 increase in annual murder rates associated with the repeal of the PTP handgun law ( $\beta=1.34$ ,  $p=.001$ , 95 % CI 0.58 to 2.11); however, the estimated effect of the policy change was reduced to an increase of 0.93 murders per 100,000 population per year after all covariates were included in the model (Table 2,  $\beta=0.93$ ,  $p<.001$ , 95 % CI 0.48 to 1.38), a 16 % increase relative to the counterfactual.

Firearm homicide, total homicide, and murder rates were positively associated with burglary rates and negatively associated with poverty rates. New unsafe handgun bans adopted in California and Massachusetts were associated with an increase in total homicide rates ( $\beta=0.46$ ,  $p=.008$ , 95 % CI 0.12 to 0.80). No other covariate reached statistical significance at the .05 level (Supplemental Tables).

## DISCUSSION

This study provides compelling evidence that the repeal of Missouri's PTP handgun licensing law, which required all handgun purchasers to pass a background check even for purchases from private sellers, contributed to a sharp increase in Missouri's homicide rate. Our estimates suggest that the law was associated with an additional 55 to 63 murders per year in Missouri between 2008 and 2012 than would have been forecasted had the PTP handgun law not been repealed.

Our analyses ruled out several alternative hypotheses to explain the relatively large and highly statistically significant increase in firearm homicides in Missouri following the repeal of its PTP handgun licensing law. We controlled for changes in unemployment, poverty, policing levels, incarceration rates, trends in crime reflected in burglary rates, national trends in homicide rates, and several kinds of other laws



that could affect homicides. That Missouri's sharp increase in firearm homicides was unique within the region, specific to firearms, and was observed in metropolitan jurisdictions across Missouri suggests that unmeasured unique local circumstances (e.g., gang activity and changes in social norms) are unlikely to have biased our estimates of the impact of the policy change. Estimates of the effects of the repeal of Missouri's PTP handgun law were similar for firearm homicides and total homicides using death certificate data for 43 states through 2010, and for murders and non-negligent manslaughters using police reports for all 50 states through 2012. This suggests that the data source and time period studied are unlikely to have biased the findings.

Causal inferences from quasi-experimental studies can be strengthened with empirical evidence supporting the proposed causal chain between the intervention, mediators, and the outcomes under study. Handgun purchaser licensing and universal background checks are hypothesized to affect homicide rates by reducing gun diversions to criminals and other prohibited groups. The evidence that Missouri's increase in firearm homicides was fueled by the state's repeal of its PTP law is bolstered by data indicating that the repeal was immediately followed by a twofold increase in the percentage of crime guns that were recovered by police soon after the guns' retail sales and an unusually large increase in the percentage of Missouri's crime guns that had been purchased from Missouri gun dealers.<sup>9</sup> These findings are consistent with prior research showing that states that regulated handgun sales by unlicensed sellers had fewer guns diverted to criminals shortly after in-state retail sales,<sup>8</sup> and that states with the most comprehensive handgun sales laws including PTP licensing requiring direct interface with law enforcement have proportionately fewer guns used in crime that were originally sold by in-state retailers.<sup>28, 29</sup> Having a large percentage of crime guns that originate from out-of-state sales, as was the case in Missouri prior to the repeal of its PTP law, is indicative of a restricted supply of guns available to criminals from in-state sources. Restrictions from local suppliers increase prices in the underground gun market and attract suppliers from states with fewer legal impediments to gun diversion.<sup>30, 31</sup>

The weakening of Missouri's gun laws may have also contributed to gun trafficking to border states that regulate handgun sales by all sellers via PTP licensing. The number of guns sold in Missouri and later recovered by police in Illinois and Iowa, two border states with handgun purchaser licensing laws, increased 37 % (from 133 to 182) from 2006 (just before Missouri's PTP law was repealed) to 2012 when the overall number of crime guns recovered by police in those states actually declined by 6 %.<sup>12</sup>

A potential threat to the validity of our estimate of the impact of the repeal of Missouri's PTP law is confounding by the simultaneous adoption of a Stand Your Ground law in Missouri. Controlling for the effects of SYG laws across all states, our estimate of the effect of the repeal of Missouri's PTP law on homicide rates declined slightly but was still substantial and statistically significant at  $p < .001$ . A separate analysis of justifiable homicide data from the FBI's Uniform Crime Reports revealed that there were approximately three additional justifiable homicides per year in Missouri following the adoption of the state's Stand Your Ground law above pre-SYG-law levels—less than 1 % of the total number of gun homicides during 2008–2010.

Critics could question the use of a relatively short pre-repeal baseline period used for this study. Using more longitudinal observations can potentially produce more accurate forecasts of the counterfactual in interrupted time-series impact studies.

However, the period from 1985 to 1998 included dramatic increases and decreases in US homicide rates. Experts believe that these changes were driven by factors that could not be directly measured (e.g., dynamics of the crack cocaine market, and changes in social norms)<sup>32</sup> and thus controlled statistically and that these unmeasured forces appear to have been uneven across states.<sup>19</sup> Such conditions pose considerable challenges for deriving unbiased estimates of policy impacts. By limiting the analyses to the relatively stable period of 1999–2012, we minimized the potential for omitted variable bias that would have likely been introduced by including data from this earlier time period.

The generalizability of our findings to other states with PTP handgun laws is unknown. Data from a recent cross-sectional study indicated that PTP licensing laws and universal background check requirements were associated with lower homicide rates after controlling for other population risk factors;<sup>9</sup> however, the lack of longitudinal data weakens causal inference from that study. We caution, however, that passage of a PTP handgun licensing law with mandatory background checks and record keeping for all handgun sales may not result in as immediate and large a reduction in firearm homicides as occurred in reverse when Missouri's law was repealed. Although our findings indicate that Missouri benefited from the protective effects of its PTP law before the law's repeal, the beneficial effects of new laws of this type may be more gradual as enforcement practices are put in place, awareness of the law increases, and the stock of guns available in the underground market is depleted. Additional methodologically rigorous research of the impact of other laws of this type is warranted.

#### ACKNOWLEDGMENTS

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## **Declaration Exhibit 6**



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## Preventive Medicine

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## Effects of changes in permit-to-purchase handgun laws in Connecticut and Missouri on suicide rates

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## ABSTRACT

**Objective.** In 2013, more than 40,000 individuals died from suicide in the United States. Restricting access to lethal means has the potential to prevent suicide, as suicidal thoughts are often transient. Permit-to-purchase (PTP) laws for handguns could potentially reduce suicides by making it more difficult for persons at risk of suicide to purchase a handgun.

**Methods.** We used a quasi-experimental research design with annual, state-level suicide data to evaluate changes to PTP laws in Connecticut and Missouri. Data were analyzed for 1981–2012. We used synthetic control modeling as the primary method to estimate policy effects. This methodology provided better prediction of pre-PTP-law-change trends in the two states with PTP law changes than econometric models and is thus likely to provide more accurate estimates of policy effects.

**Results.** The synthetic control model estimated a 15.4% reduction in firearm suicide rates associated with Connecticut's PTP law. Missouri's PTP law repeal was associated with a 16.1% increase in firearm suicide rates. Evidence that PTP laws were associated with non-firearm suicide rates was mixed in Connecticut and negative in Missouri.

**Conclusion.** The findings are consistent with prior research linking firearm availability to increased risk of suicide and lower suicide risks associated with PTP handgun laws.

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## Introduction

In the United States, suicide is the second leading cause of death for persons age 15–34 years, and the tenth leading cause of death overall (CDC, 2015a). In 2013 alone, more than 40,000 individuals lost their lives to suicide, compared to approximately 16,000 homicides (CDC, 2015b). More than half of all suicides were committed with a firearm (CDC, 2015a).

Household-level and state-level studies have found that access to firearms is positively associated with suicide risk after controlling for other risk factors (Anglemyer et al., 2014). Case fatality rates for suicide attempts by firearm exceed 90% (Miller et al., 2004). Though many commonly think that a person contemplating suicide will use an equally lethal alternative method if the original means of suicide is restricted, suicidal ideation is often transient (Miller et al., 2006; Deisenhammer et al., 2009). And for many individuals attempting suicide, the time between suicidal ideation and attempt can be as little as 10 min (Deisenhammer et al., 2009). If a person's access to particularly lethal means can be restricted during periods of distress or impulsivity, a suicide may be prevented. For these reasons, suicide prevention research

has explored what impact lethal means restriction can have on suicide attempts and completion (Hawton, 2007; Barber & Miller, 2014).

Laws requiring permits to purchase firearms represent one method of means restriction for firearms, especially for some high-risk individuals, which require handgun purchasers to obtain a permit-to-purchase (PTP) that is contingent upon the applicant passing a background check. These PTP laws typically require an in-person application at a law enforcement agency and, in some cases, applicants must successfully complete safety training and experience significant waits for review. Permits are required for virtually all transfers of handguns including those conducted by private unlicensed sellers. A background check requirement for private sales should prevent a sale to someone with a prohibiting condition that reflects heightened risk for suicide, including conviction for violent crimes, being under a restraining order for domestic violence, multiple offenses involving drugs or alcohol abuse, and being involuntarily committed to a mental hospital or found by a court to be a threat to themselves or others due to mental illness. Also, the additional time required to obtain a gun in states with a PTP law could restrict access to firearms among those not already owning firearms during times of suicidal ideation or planning. Federal law does not require a permit or background check for handgun purchasers are only required under federal law if the seller is a licensed gun dealer.

Missouri had a PTP law for handguns in place beginning in 1921. Anyone wanting to legally purchase a handgun from a licensed dealer or

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private seller was required to apply in-person at a local sheriff's office. A PTP for a handgun was issued to approved individuals and good for 30 days. Missouri's PTP law was repealed effective August 28, 2007, reducing a barrier to handgun access for prohibited persons. Prior research evidence indicates that the PTP law repeal was associated with an increase in the diversion of guns to criminals Webster et al., 2013 and homicides committed by firearms in Missouri (Webster et al., 2014).

Prior to 1995, Connecticut's laws regarding background checks for handgun sales could be characterized as vague. In 1965, the state enacted a law requiring all handgun sellers and buyers to use a written application that was to be mailed to the local authorities prior to a sale. If that municipal authority were to "have knowledge" that the buyer had a felony conviction, then the authority would notify that seller that no sale could take place. A one week waiting period — extended to two weeks in 1975 — was also instituted. A new state law went into effect in October 1994, establishing an optional eligibility certificate for handgun buyers that could be issued by local authorities upon the purchaser passing a background check. Holders of an eligibility certificate for handgun purchases were not required to comply with the waiting period. Local authorities were instructed to make a "reasonable effort" to determine if any applicant was ineligible to own a handgun. It was not until October 1, 1995 that Connecticut established a mandatory PTP system applicable to all handgun buyers and made it illegal to sell a handgun to anyone who did not have an eligibility certificate. Such certificates required the applicant to pass a background check and successfully complete an 8-hour handgun safety course. A recent study demonstrated that enactment of Connecticut's PTP law was associated with decreases in firearm homicides and had no impact on homicides committed by other means (Rudolph et al., 2015).

The current study was designed to estimate the effects that these two changes in PTP handgun laws had on suicide rates. Prior research has shown a negative association between the presence of PTP laws and suicide rates (Andrés & Hempstead, 2011; Fleegler et al., 2013) however, most of the variation examined in these studies was cross-sectional and did not focus on whether the policies changed the risk of suicides over time in states when they adopted or repealed a PTP law. A recently published study by Anestis et al. (Anestis et al., 2015) also explored this topic, however, this study had important limitations including that it principally estimated cross-sectional associations. Our study seeks to provide a thorough and rigorous evaluation of the impact of changing PTP handgun laws on suicide in Connecticut and Missouri.

## Methods

### Design

A quasi-experimental research design was used with annual, state-level suicide rates and counts to contrast differences pre- versus post-PTP law change in Connecticut and Missouri compared with states that did not experience a PTP law change. State-level data for suicides were available for the years 1981–2012. Suicides were stratified by mechanism (firearm vs. non-firearm) to test the specificity of the policy effects and examine if possible method substitution occurred following the PTP law change.

### Data

Suicide data were accessed from the Centers for Disease Control and Prevention's Web-based Injury Statistics Query and Reporting System (WISQARS) CDC, 2015c for years 1981–2007. For data after 2007, WISQARS suppresses the data if counts for individual state-years are less than 10 — which was particularly prevalent when examining the data within age strata. Data were obtained for years 2008–2012 through a request to the National Association for Public Health Statistics and Information Systems (NAPHSIS, National Association for Public Health Statistics and Information Systems, 2014).

The analyses controlled for a number of factors previously associated with suicide rates at the state level including: unemployment; poverty; demographics (percentage of the population that was male, black, Hispanic, married, completed high school, a military veteran, or who lived in a Metropolitan Statistical Area

(MSA)), per capita consumption of ethanol spirits, firearm availability, and rate of religious adherence. The analyses also included control variables for states with strong mental health parity laws because access to mental health services could protect against suicides.

Annual unemployment rates (per 100 population age 16 or older) were accessed from the Bureau of Labor Statistics (BLS, 2012). Poverty rates (per 100 population) were from the Current Population Survey (Census, 2012a). Percent MSA was obtained from the Crime in the United States reports (FBI, 2012). The proportions of state population that were black or Hispanic were from the Census Bureau and interpolated between census years (Census, 2012b). Marital status, percent completing high school, proportion male, and proportion of the state that are military veterans were accessed from Census data and the American Community Survey (Census, 2015). Per capita ethanol spirit consumption was obtained from National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2014). Rates of religious adherence were obtained from the Religion and Congregation Membership Survey interpolated between census years (ARDA, 2014). A commonly used firearm availability proxy (ratio of firearm suicides to all suicides) was created using data from WISQARS (used only to improve matching in the synthetic control models) (CDC, 2015c).

A significant challenge to deriving valid estimates of the impact of new state policies on public health and safety outcomes is the considerable heterogeneity among states and the inability to directly measure important factors that influence trends that vary across states. An innovative approach for dealing with this challenge is creating so-called "synthetic controls" to estimate the counterfactual for states that adopt new policies. This method uses data from a pool of potential comparison states that do not have the type of law being evaluated to create a synthetic control. This synthetic control is derived from a combination of observations from the comparison pool that are weighted according to their ability to accurately predict the pre-law trends in the outcome variable of the state where the law of interest is being changed. This approach can produce a more accurate counterfactual for the state where the law change occurs and therefore a more accurate estimate of a policy impact than analytic approaches that estimate policy effects based on a much broader set of data that include non-intervention comparisons that may be substantially different from the intervention state.

The synthetic control methodology avoids the heterogeneity assumption, that an intervention has constant effects across all observations, which underlies estimates derived from regression analyses. This methodology allows us to separately estimate the effects of a law's change on suicide for Connecticut and Missouri over different time periods.

To construct appropriate synthetic controls, we restricted the donor pool of comparison states for Connecticut's synthetic control to the 39 other states without a PTP handgun law in 1995. For Missouri, which repealed its PTP law in 2007, we included the other 9 states (excluding the District of Columbia and Connecticut) that had a PTP law in 2007. We used covariate and suicide data from 1981–2006 for Connecticut, which adopted its law in late 1995, avoiding extrapolation beyond ten years after the passage of Connecticut's PTP law as recommended by Abadie, Diamond, and Hainmueller (Abadie et al., 2010). For Missouri, which repealed its law in 2007, we used data from 1981–2012. Dependent variable rates were smoothed by analyzing three-year moving averages for  $Y_{t-1}$ ,  $Y_t$ , and  $Y_{t+1}$  to ease interpretation of otherwise volatile data (Rudolph et al., 2015; Abadie et al., 2010; Abadie & Gardeazabal, 2003; Abadie et al., 2015). Separate analyses were performed for firearm suicides and non-firearm suicides to assess whether any estimates of policy effects were specific to firearm suicides and if the policy change was associated with method substitution. The synthetic controls' ability to predict pre-law-change trends in suicide rates in the states that changed their PTP laws was assessed by calculating the root mean square prediction error (RMSPE) and contrasting it with the RMSPE for a simple average of the entire pool of control states that were used to predict suicide rates in Connecticut and Missouri.

Because this method does not produce traditional p-values or tests of statistical significance, we performed so-called placebo tests with each of the states in the donor pool of control states for Connecticut and Missouri. Using firearm suicide rates, we ran the analyses with each state from the donor pool as if it were the "treated" state that experienced the PTP law change at the time that Connecticut or Missouri did. We then calculated the cumulative percent change in firearm suicides during the post-law change periods for Connecticut (1996–2005) and Missouri (2008–2012). We calculated the percent difference in cumulative post-law-change firearm and non-firearm suicide rates between the observed and the counterfactual estimated by each of the synthetic controls. This allowed us to examine the estimated percentage change associated with the changes in the PTP laws in Connecticut and Missouri in comparison to the percentage change estimates from the placebo tests in the states from each of



the respective donor pools of control states and thus assess how unique the changes observed in the intervention states were.

To compare the results of the synthetic control methods to a more traditional approach to policy evaluation, we also conducted standard econometric time series analyses. We used pooled time series with annual cross-sectional data from all 50 states to evaluate the associations between the passage (Connecticut – 1995) and repeal (Missouri – 2007) of the PTP laws and total, firearm, and non-firearm suicides. We created an indicator variable for each state (Connecticut and Missouri) to represent the state's change in PTP law status. For Connecticut, the indicator was coded as 0 prior to the passage of the law, a fraction for the proportion of the days in the year the law was in effect, and 1 for each subsequent year. The opposite was true for Missouri; the indicator was coded as 1 prior to the repeal, a fraction for the proportion of the days in the year the law was in effect, and 0 for each subsequent year without the law. To estimate the effects of a change in PTP law status and firearm suicides, we used negative binomial regression models using state and year fixed effects. Fixed effects were used to account for time-invariant factors and omitted variables that may be associated with suicides. Standard errors were adjusted to account for clustering by state. Negative binomial regression was used due to over-dispersion in the outcome variables. The same covariates as with the synthetic control models were used (excluding the gun availability proxy).

All analyses were conducted using Stata IC v. 13.0 (StataCorp., 2013). This study was deemed to be “not human subjects research” by the Johns Hopkins Bloomberg School of Public Health.

## Results

### Synthetic control model

Table 1 compares the mean value of predictors in the treated unit and the synthetic control for the period prior to the PTP law change. The means are averaged over the entire pre-law-change period except for the lagged firearm and non-firearm suicide rates.

**Table 1**

Predictor balance averaged over pre-law-change period for Connecticut, Missouri, and their synthetic controls.

	Connecticut	Synthetic control firearm suicides	Synthetic control non-firearm suicide
Percent white	89.8	94.2	90.0
Percent ages 18–34	27.4	28.8	28.0
Gun availability proxy*	0.44	0.38	0.61
Percentage with veteran status	16.9	17.1	17.1
Percentage male	47.4	47.4	48.0
Unemployment rate	5.14	5.94	6.60
State-years of any mental health parity law	0.00	0.00	0.00
	Firearm/non-firearm		
Suicide rate, 1981	3.68/4.93	3.81	4.93
Suicide rate, 1987	4.21/5.41	4.21	5.42
Suicide rate, 1994	4.41/5.13	4.41	5.13
	Missouri	Synthetic control firearm suicides	Synthetic control non-firearm suicide
Percent white	87.8	79.8	86.9
Percent ages 18–34	25.4	26.8	25.5
Gun availability proxy*	0.62	0.66	0.50
Percentage with veteran status	16.2	14.6	14.4
Percentage male	47.3	47.9	47.7
Unemployment rate	5.70	4.94	5.49
State-years of any mental health parity law	0.27	0.06	0.13
	Firearm/non-firearm		
Suicide rate, 1981	7.48/4.41	8.70	4.56
Suicide rate, 1993	8.43/4.38	8.33	4.47
Suicide rate, 2006	7.55/5.77	6.78	5.43

The intervention states and their respective synthetic controls are very similar on baseline suicide rates and predictors. There are some divergences between, for instance, the value of Connecticut's gun availability proxy and its synthetic control for firearm suicides and between Missouri's racial demographic composition and its synthetic control for firearm suicides. Several other predictors were used in sensitivity analyses including a measure of the urban population, per capita consumption of ethanol derived from spirits, a measure of poverty, and marital status. These additional predictors neither improved the pre-intervention fit nor substantially altered the results.

States with the largest weights for Connecticut's synthetic controls were Rhode Island (0.741) and North Dakota (0.259) for firearm suicides and Utah (0.332) and Pennsylvania (0.210). The largest weights for Missouri's synthetic controls were North Carolina (0.790) and Nebraska (0.210) for firearm suicides and Iowa (0.447) and New Jersey (0.285). Appendix Table 1 lists all states with non-zero weights for the synthetic controls for each intervention state for firearm and non-firearm suicide rates. The prediction error (RMSPE) for the pre-law-change period produced by an average of all the states in the respective donor pools for each PTP law change studied were 19 times higher than the “synthetic Connecticut's” firearm suicide rates, 3.8 times higher than the “synthetic Connecticut's” non-firearm suicide rate, 6.9 times higher than “synthetic Missouri's” firearm suicide rates, and 3.2 times higher than “synthetic Missouri's” non-firearm suicide rates (Table 2). Prediction error for the baseline periods were 2 to 3 times higher in the synthetic control models for the 20–29 age group versus the synthetic control models for the overall state populations, yet was considerably lower than the prediction error when using the average of the donor pool states.

Figs. 1 and 2 show a panel of synthetic control analyses for Connecticut and Missouri, respectively for: (a) firearm suicide, (b) non-firearm suicide; (c) firearm suicide for persons age 20–29, and (d) non-firearm suicide rates for persons age 20–29. For firearm suicides, no systematic differences between Connecticut and its synthetic control are evident during the pre-law period. During the post-intervention period, Connecticut's firearm suicide rate consistently stays below that of its synthetic control. Connecticut's non-firearm suicide rate is relatively stable throughout the entire study period (Fig. 1(b)). After actual non-firearm suicide rates closely tracked the synthetic control during the pre-law period, the rate for Connecticut's synthetic control rose gradually above the actual rate for the state during the post law period. The pattern observed for Connecticut relative to its synthetic control for all firearm suicides is evident for firearm suicides among 20–29 year olds, though the departure of Connecticut's post-law trend from its synthetic control's path appears more pronounced (Fig. 1(c)). Among 20–29 year-olds, Connecticut's non-firearm suicide rate closely tracks its synthetic control until it dips well below its synthetic control during the middle years of the post-law period (1998–2002) (Fig. 1(d)).

Missouri's firearm suicide rates were slightly higher than its synthetic control's during the 1990s, but the difference began to grow the year prior to the PTP law repeal (2006) and the divergence grew over the 5-year period following the repeal of the PTP law when Missouri's rate is noticeably higher than the control (Fig. 2(a)). Missouri's non-firearm suicide rate tracks closely with that of its synthetic control throughout most of the study period with the actual rate slightly higher than its

**Table 2**

Root Mean Square Prediction Error (RMSPE) for the pre-law-change period for the synthetic controls for Connecticut and Missouri compared with the RMSPE for the average of all donor states who could have changed their PTP law at the time Connecticut's and Missouri's PTP laws changed.

	Connecticut		Missouri	
	Synthetic control	All donor states	Synthetic control	All donor states
Firearm suicides	0.27	5.03	0.52	3.58
Non-firearm suicides	0.13	0.50	0.14	0.47

## Synthetic Control Analyses of Connecticut's 1995 PTP Law, Enacted October 1, 1995

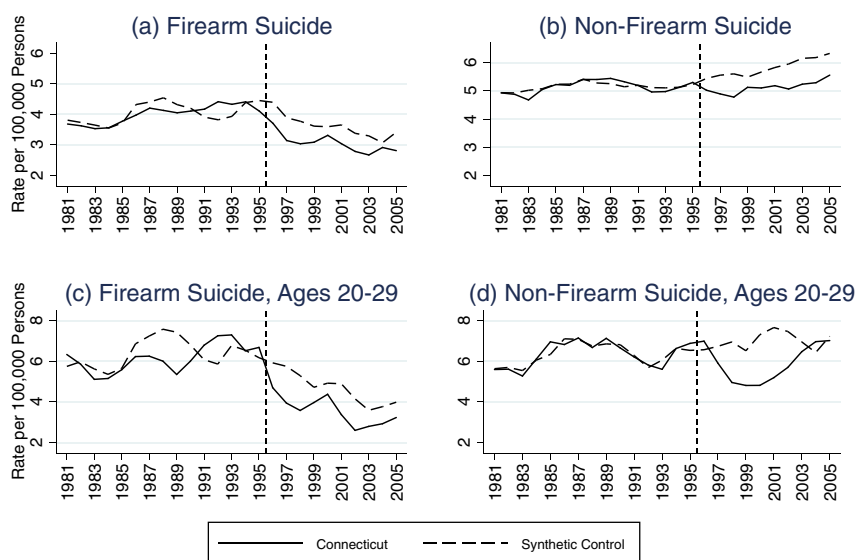


Fig. 1. Synthetic control analyses of Connecticut's PTP law, enacted October 1, 1995.

control 2006–2010 (Fig. 2(b)). Among persons age 20–29, Missouri's firearm suicide rate is above its synthetic control for much of the initial pre-intervention period; however, the actual and predicted rates are similar during the 8 years leading up to the law's repeal. During the post-repeal period, Missouri's firearm suicide rate among individuals age 20–29 increases and stays above that of the control (Fig. 2(c)). A similar pattern is evident for non-firearm suicide rates for age 20–29 except that the increase in Missouri relative to its control begins in 2005, prior to the repeal of the state's PTP law (Fig. 2(d)).

Connecticut's firearm suicide rates were 15.4% lower than that of its synthetic control during the 10-year post-law period. Fig. 3(a) shows that only 2 of the 39 control states experienced reductions in firearm suicides that were larger in percentage terms based on the placebo

tests. The largest percentage reduction in firearm suicide rates based on the placebo tests occurred in Rhode Island; however, its prediction error for the pre-law period revealed the worst model fit among the pool of control states. Connecticut's non-firearm suicide rates, however, were 11.9% lower during the post-law period than predicted by the synthetic control. Six states had percentage reductions in non-firearm suicide rates relative to their synthetic controls during 1996–2005 that were larger than Connecticut's (Fig. 3(c)).

The synthetic control model estimate for the effect of Missouri's repeal of its PTP law was 16.1% higher than the counterfactual during the 5-year post-law period. The increase in firearm suicides in Missouri following the repeal of its PTP law was unusual among states that had a PTP handgun law in 2006 (Fig. 3(b)). Among the donor pool of 9 control

## Synthetic Control Analyses of Missouri's 2007 PTP Law, Repealed August 28, 2007

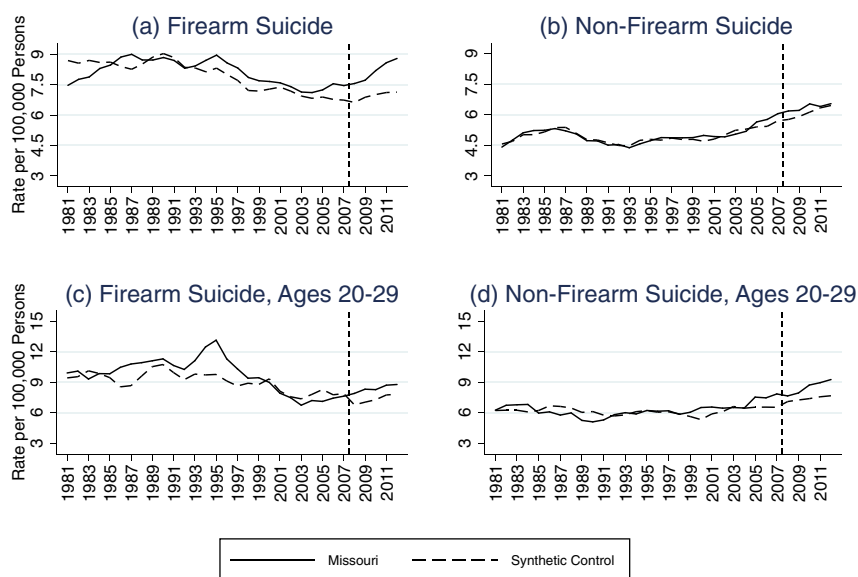


Fig. 2. Synthetic control analyses of Missouri's PTP law, repealed August 28, 2007.

Percent Change in Estimated Cumulative Firearm and Non-firearm Suicides in Connecticut, Missouri, and Donor Pools

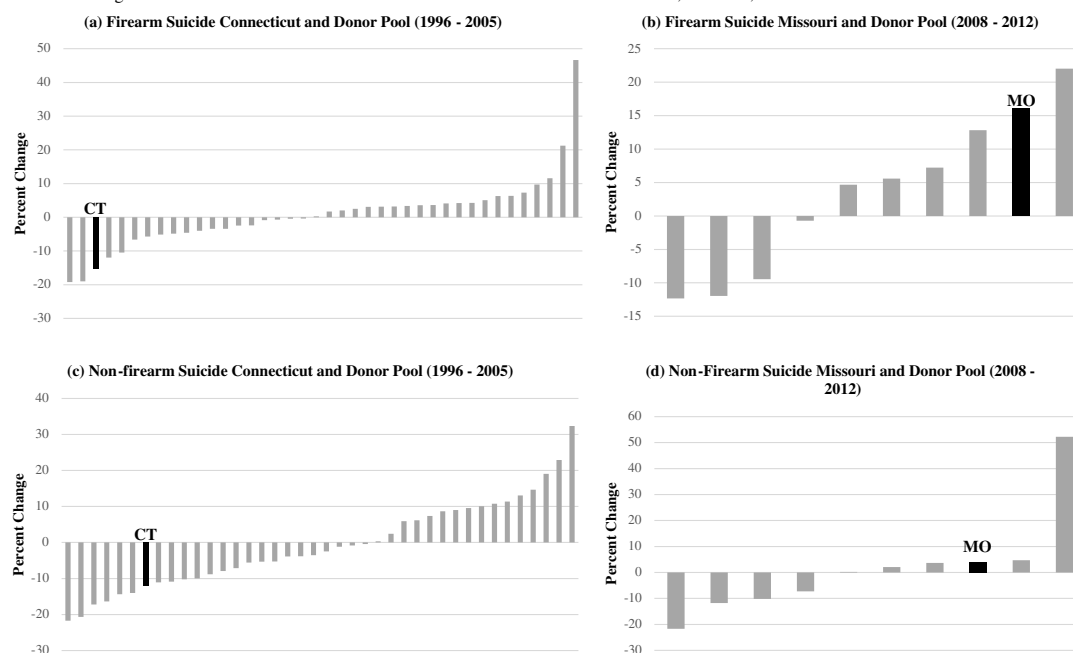


Fig. 3. Percent change in estimated firearm and non-firearm suicides in Connecticut, Missouri, and donor pools.

states for Missouri, only Hawaii's placebo test for policy effects at the same time as Missouri's law change produced a larger percentage increase in firearm suicide rates. However, Hawaii's synthetic control model produced the worst pre-law-change model fit among the pool of donor states and its baseline rate of firearm suicide was less than a third as high as that of Missouri's. In absolute terms, the increase in Hawaii's annual firearm suicide rates (0.61) during 2008–2012 was half that observed in Missouri (1.29). Missouri's non-firearm suicides were 4.2% higher than the control during the period after the PTP law repeal (Fig. 3(d)).

For the 20–29 year age group, Missouri's observed suicide rates after the PTP law repeal were 14.5% higher than that of the synthetic control for suicides committed with firearms and 15.0% higher for non-firearm suicides.

#### Alternative regression model estimates

The alternative method of estimating policy effects – negative binomial regression models with panel data from 50 states – produced estimates indicating that Connecticut's PTP law was associated with a 12% reduction in firearm suicide rates ( $p = 0.004$ ), a 14% increase in rates of non-firearm suicide ( $p = 0.002$ ), and no association with overall suicide rates. Among 20–29 year-olds, Connecticut's law was associated with a 28% reduction in firearm suicide rates ( $p = 0.001$ ) and a 16% increase in non-firearm suicide rates ( $p = 0.046$ ). The repeal of Missouri's PTP law was not associated with changes in any of the suicide measures (Appendix Table 2). Comparisons of the RMSPE for Connecticut and Missouri generated from these regression analyses reveal poor model fit compared with the synthetic control models.

#### Discussion

Prior research produced evidence suggesting that handgun purchaser licensing laws were associated with lower suicide rates, but focused principally on cross-sectional associations (Andrés & Hempstead, 2011; Flegler et al., 2013; Anestis et al., 2015). This study investigates if recent changes in permit-to-purchase (PTP) handgun laws led to

changes in suicide rates in ways consistent with the hypothesis that these laws reduce suicides by decreasing the availability of a highly lethal means of suicide.

We applied a relatively new approach that has been used to study the effects of state laws on public health outcomes that identifies comparison states that, in combination, constitute so-called synthetic controls that best predict the outcome measures in the states where the policies of interest are changing. Using this method, we find some support for this hypothesis that PTP laws reduce suicides. Connecticut experienced a drop in its firearm suicide rate coincident with the adoption of a PTP handgun law that was greater than nearly all of the 39 other states that did not have such a law at that time and Missouri experienced an increase in its firearm suicide rate following the repeal of its PTP handgun law that was larger than all states that retained their PTP laws. The estimated effects of the PTP law on firearm suicide rates were more pronounced among individuals ages 20–29, the age at which young adult first become legally eligible to purchase handguns. What one infers about the strong negative association between Connecticut's PTP law and firearm suicide rates, depends on how one interprets the data on the law's association with non-firearm suicides. The synthetic control method indicated a reduction in non-firearm suicides associated with Connecticut's PTP law that was proportionately similar to that derived for firearm suicides. However, the estimate for non-firearm suicides was based principally on increases that occurred in the state's synthetic control during the post-law period when Connecticut's actual rate was stable. Further, the estimated effect was not so unusual relative to the placebo tests in the 39 other states without PTP laws in 1995. The regression analyses with 50 states' data estimated a large and statistically significant negative association between Connecticut's PTP law and firearm suicides rates, but a statistically significant positive association between the law and non-firearm suicide rates. Thus, the evidence that Connecticut's PTP law was associated with any change in non-firearm suicides is unclear at best.

Missouri's firearm suicide rates rose 16% over and above the counterfactual estimated by the synthetic control for the first 5 full years after the repeal of Missouri's PTP handgun law. The percentage increase was greater than 8 of the 9 other states that had a PTP law when



Missouri's was repealed and four times that estimated for Missouri's non-firearm suicide rates. We would expect the effects of the repeal of Missouri's PTP law would be more concentrated among those in their twenties; however, that was not evident.

Findings from the alternative method for estimating policy effects, negative binomial regressions using data from all 50 states, differ from those generated by the synthetic control method with the exception of also showing Connecticut's PTP law negatively associated with firearm suicide rates in the overall population and among the 20–29 age group. Inferences about the association between PTP laws and suicides for the other outcomes, therefore, depends on which method of estimating the counterfactual for suicide trends in the two states that changed their PTP laws is more accurate. The negative binomial models used data from all 50 states to generate treatment effects averaged across 50 states. We believe that the synthetic control approach is more defensible because it selects and weights comparison states based solely on how well the data from those states predict baseline suicide trends in the states that changed their PTP laws. As is evident by the data in Table 2, using data for the entire pool of donor states for Connecticut and Missouri regardless of how well those state's data predict suicide rates in the states that changed their PTP law can provide for a poor counterfactual for states with the law changes in comparison to that of synthetic controls. Furthermore, prediction error for Connecticut and Missouri's suicide rates from the negative binomial regression models was much greater than was produced by the synthetic control models.

There are several strengths to the study in addition to the use of synthetic controls to estimate temporal relationships between PTP laws and suicide rates. The analyses controlled for a number of state demographic characteristics that could be associated with the risk of suicide including the proportion of the state population who were military veterans in any given year. Since veterans are at increased risk of suicide compared to the general population, we controlled for this to ensure our results were attributed to the policy change and not some unmeasured factor. Finally, we tested the specificity of our results by examining the effects of the law changes on non-firearm suicides. Since means substitution is an important consideration when studying suicide, we were able to evaluate whether a substitution effect occurred due to means restriction after the passage of Connecticut's PTP law.

As with most evaluations of public policy, we cannot rule out the possibility that our estimates of the associations between PTP laws and suicide rates are confounded by unmeasured determinants of suicide correlated with changes in the laws. Furthermore, data are not available to ascertain whether the reductions in firearm suicides were experienced by groups legally prohibited from purchasing handguns or who might otherwise be deterred from purchasing handguns as a result of a law requiring handgun purchaser permits contingent upon applicants passing background checks and safety training requirements.

The use of synthetic control methods provides the best available estimates and suggests that the presence of a PTP law could prevent a significant number of suicides. Based on the nature of the synthetic control, however, these results do not provide a confidence interval leading to uncertainty around the point estimate. These laws appear to be protective in ways that you might hypothesize based on what is known about the role of firearms and risk of suicide, but it is unclear exactly what magnitude effect on lives saved these laws have. Despite these limitations, the current study finds evidence to suggest that PTP laws for handguns reduce suicide rates. Future research should explore other factors that may predict state-level suicide rates so that models to test the effects of policies that could serve as a form of means restriction produce more precise estimates of policy effects.

The findings of the study are relevant to physicians as it provides further evidence that reducing access to a firearm can prevent suicide. Physicians who treat patients at elevated risk for suicide can counsel patients and family members about the link between access to a firearm and suicide risk and the potential benefit of reducing firearm access. The

study also highlights the value of a population based approach to suicide prevention. Many who are at elevated risk for suicide do not seek care or have limited access to care and those who are seen may not follow the advice of physicians on matters related to firearms. A PTP law that would restrict access to handguns for individuals with a history of severe mental illness, criminal behavior, domestic violence or substance abuse, or by simply delaying access to a firearm during a time of crisis through an application review period could prevent suicide.

## Financial disclosure

No financial disclosures were reported by the authors of this paper.

## Conflict of interest statement

This study was funded by The Joyce Foundation. The funder had no role in the study design, collection, analysis, or interpretation of the data, writing of the report, or the decision to submit the report for publication.

## Acknowledgments

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## Appendix A

**Appendix Table 1**

States with non-zero weights for synthetic controls for Connecticut's and Missouri's firearm and non-firearm suicide rates.

	Firearm suicides	Non-firearm suicides
	Connecticut	
Rhode Island	0.791	0.071
North Dakota	0.078	–
South Dakota		0.140
Pennsylvania	–	0.210
Utah	–	0.332
Arkansas	–	0.124
New Mexico	–	0.117
Mississippi		0.033
	Missouri	
Nebraska	0.210	–
North Carolina	0.790	0.145
Iowa		0.447
Massachusetts		0.002
Michigan		0.121
New Jersey		0.285

**Appendix Table 2**

Estimates of the association between permit-to-purchase handgun laws changes in Connecticut and Missouri from negative binomial regression analyses\* with data from 50 states for the years 1981–2012.

State	Total population	Age 20–29 years
<i>All methods suicides IRR (95% CI, p-value)</i>		
Connecticut	1.01 (0.95 to 1.08, p = 0.765)	0.92 (0.81 to 1.04, p = 0.175)
Missouri	1.03 (0.97 to 1.08, p = 0.326)	0.96 (0.86 to 1.07, p = 0.430)
<i>Firearm suicides IRR (95% CI, p-value)</i>		
Connecticut	0.88 (0.81 to 0.96, p = 0.004)**	0.70 (0.57 to 0.84, p < 0.001)**
Missouri	1.02 (0.96 to 1.09, p = 0.450)	0.97 (0.84 to 1.11, p = 0.619)
<i>Non-firearm suicides IRR (95% CI, p-value)</i>		
Connecticut	1.14 (1.05 to 1.24, p = 0.002)**	1.12 (0.96 to 1.31, p = 0.140)
Missouri	1.03 (0.95 to 1.11, p = 0.456)	0.93 (0.81 to 1.07, p = 0.317)

\*\*Indicates p < 0.05.

\*These analyses controlled for the presence of a strong parity law; percent MSA; per capita consumption of ethanol; percent poverty; unemployment; marital status, percent completed high school; percent male; percent veteran; and rate of religious adherence.

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## **Declaration Exhibit 77**



# Association between Firearm Laws and Homicide in Urban Counties

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**Abstract** Laws related to the sale, use, and carrying of firearms have been associated with differences in firearm homicide rates at the state level. Right-to-carry (RTC) and stand your ground (SYG) laws are associated with increases in firearm homicide; permit-to-purchase (PTP) laws and those prohibiting individuals convicted of violent misdemeanors (VM) have been associated with decreases in firearm homicide. Evidence for the effect of comprehensive background checks (CBC) not tied to PTP is inconclusive. Because firearm homicide tends to concentrate in urban areas, this study was designed to test the effects of firearm laws on homicide in large, urban U.S. counties. We conducted a longitudinal study using an interrupted time series design to evaluate the effect of firearm laws on homicide in large, urban U.S. counties from 1984 to 2015 ( $N = 136$ ). We used mixed effects Poisson regression models with random intercepts for counties and year fixed effects to account for national trends. Models also included county and state characteristics associated with violence. Homicide was stratified by firearm versus all other methods to test for specificity of the laws' effects. PTP laws were associated with a 14% reduction in firearm homicide in large, urban counties

(IRR = 0.86, 95% CI 0.82–0.90). CBC-only, SYG, RTC, and VM laws were all associated with increases in firearm homicide. None of the laws were associated with differences in non-firearm homicide rates. These findings are consistent with prior research at the state level showing PTP laws are associated with decreased firearm homicide. Testing the effects of PTP laws specifically in large, urban counties strengthens available evidence by isolating the effects in the geographic locations in which firearm homicides concentrate.

**Keywords** Gun policy · Firearm · Homicide

## Introduction

In 2016, there were 14,415 firearm homicides in the United States (U.S.), which accounted for nearly 75% of all homicides [1]. Firearm homicides are not distributed equally across the U.S.; 63% occurred in large, urban counties (classified as Large Central Metro and Large Fringe Metro by the U.S. Census Bureau) which contain 56% of the U.S. population [2]. States have enacted policies in response to firearm homicide, but the effect of these policies specifically in urban areas is unknown. In this study, we aim to evaluate the effect of five firearm-related policies on homicide in large, urban counties: comprehensive background checks, permit-to-purchase, right-to-carry, stand your ground, and violent misdemeanor prohibitions.

Weaknesses in federal law allow prohibited individuals to obtain firearms through unregulated private

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sales. Currently, only nineteen<sup>1</sup> states and the District of Columbia have laws requiring point of sale background checks be conducted when the seller is a private party. These laws are often referred to as comprehensive background check (CBC) laws. CBC laws require all sellers, both licensed retailers and private parties, to make firearm transfers contingent on the purchaser passing a background check. Private sales include those made at gun shows, sales arranged between strangers online, and transfers between friends and acquaintances. The most recent estimate by Miller and colleagues suggests that approximately 20% of guns are obtained without a background check [3]. In the 13 states with the least restrictive firearm laws, state prison inmates who were incarcerated for a gun crime were more likely to report obtaining that gun through an unregulated private sale than from a licensed dealer [4]. Data on recovered crime guns suggest more than 80% of criminals using firearms to commit crime were not the purchaser of record [5]. There is inconclusive evidence on the effect of background checks for private sales on firearm homicide at the state level.

Realizing that requiring background checks for private sales may, by itself, not be sufficient, ten states and the District of Columbia have an additional handgun purchaser licensing requirement; often referred to as permit-to-purchase (PTP) laws. PTP laws typically require that prospective handgun purchasers apply directly to a state or local law enforcement agency, many require applicants to submit fingerprints, for a purchase permit prior to approaching a seller. PTP laws may include a more thorough background check which law enforcement can take 30 days or more to complete. Sellers, both licensed and private, can only sell to someone with a valid purchase permit which is valid for varying lengths. States with longer duration permits may also require a point of sale background check to ensure that the purchaser has not become prohibited since the issuance of the permit. Prior research has found that PTP laws are associated with reductions in the diversion of guns to criminals [6] and gun homicide [7, 8].

It is important to note the differences between CBC and PTP laws because they are often conflated in research when in fact they are implemented differently, in ways that may influence their effectiveness. CBC laws generally depend upon the use of the National Instant

Criminal Background Check System (NICS) that is also used by licensed dealers; however, issues with the NICS have been identified related to the which records are reported to the system and the quality and timeliness of records that are reported [9]. PTP laws provide a longer period for law enforcement to conduct its background check at the local level, and these checks may have access to more records increasing the likelihood that law enforcement can identify and screen out those with a prohibiting condition.

Right-to-carry (RTC) laws require law enforcement to issue concealed carry permits to any individual that meets objective criteria or allow for permitless carry (permitless carry allows for individuals who are not otherwise prohibited from gun ownership to carry without obtaining a permit). RTC laws make it easier for individuals to carry loaded, concealed firearms in public spaces, and may require little or no safety training or demonstrations of competence and proficiency. Previous research suggests that RTC laws are associated with increased rates of violence at the state level [10, 11].

Stand your ground (SYG) laws are those that give individuals expanded protections for use of deadly force in a response to a perceived threat with no duty to retreat. These laws may make otherwise non-lethal encounters deadly if individuals are carrying loaded, concealed firearms, and feel emboldened to use their firearms in self-defense rather than leaving or de-escalating a volatile situation. Research on SYG laws shows they are associated with increases in rates of state-level firearm homicide [12, 13].

Violent misdemeanor (VM) prohibitions extend criminal prohibiting conditions for the purchase of a firearm to those who have been convicted of a misdemeanor crime of violence. States with these laws recognize that prohibiting a broader pool of potentially risky firearm owners may screen out individuals at risk of committing violence but who have not yet been convicted of a felony or domestic violence misdemeanor. Previous research showed decreased risk of future gun crime among those prohibited for a VM crime [14]. A recent study by Zeoli et al. found lower rates of intimate partner homicide in states with VM prohibitions [15].

Studies evaluating the effect of CBC, PTP, RTC, SYG, and VM laws on firearm homicide have been conducted at the state level. However, firearm homicide occurs more frequently in urban areas, so evaluations at the state level may underestimate the effectiveness of these laws in the places where homicides predominate.

<sup>1</sup> While Nevada passed a CBC law, there are implementation issues related to how the law was written and whether it will be enforced.

This study sought to explore the effects of these firearm laws on homicide in large, urban counties where firearm homicide is more likely to occur. We also sought to separate out the effects of states with CBC-only laws and those with PTP. Based on prior research, we hypothesized that PTP and VM laws would be associated with protective effects on homicide rates, CBC-only laws would have no effect, and RTC and SYG would be associated with harmful effects.

## Methods

### Design

We conducted a quasi-experimental longitudinal study using an interrupted time series to evaluate the effect of firearm laws on homicide in large, urban U.S. counties from 1984 to 2015. Because these laws are related to firearms, county-year counts of homicide were stratified by firearm versus all other methods to test for specificity of the laws' effects.

### Data and Measures

Based on previous research, we hypothesized that, due to the specificity of the laws regarding firearms, changes to these laws would affect only firearm homicides. The primary outcome for the study was annual, county-level counts of firearm homicide obtained from the Centers for Disease Control and Prevention's Wide-ranging Online Data for Epidemiologic Research (WONDER) system [16]. Because firearm homicide tends to concentrate in urban areas, we restricted our analysis to counties with U.S. Census urbanization codes of "Large Central Metro" and "Large Fringe Metro" and populations greater than 200,000 across the study period resulting in a sample that contained 136 counties over 32 years for a total of 4352 county-year observations.<sup>2</sup>

We accessed additional county-level variables from WONDER including the percent of the population who were African American males age 15–24 and county population. County-level percent poverty was obtained from the U.S. Census and interpolated

between census years [17]. Average annual measures of county-level unemployment were obtained from the Bureau of Labor Statistics Local Area Unemployment Statistics [18]. State-level variables were used for two covariates that were not readily available at the county level: incarceration rates [19] and state law enforcement expenditures [20].

We conducted legal research to identify the effective dates for each state's policies including month, day, and year. Indicators for policy variables were generated based on these effective dates. Policy indicators were coded as 1 when a law was in effect and 0 otherwise. To reduce measurement error, the policy indicators were coded as a proportion for the number of days the policy was in effect in the year in which a policy was first implemented (see Table 1).

Exploratory data analysis revealed outliers for non-firearm homicide counts for counties near New York City in 2001 due to the attack at the World Trade Center; nearly 3000 additional lives were lost due to non-firearm homicide. For counties within approximately 50 miles of New York City, we excluded the counts of non-firearm homicide for 2001 only.

### Analytic Methods

We conducted an interrupted time series analysis to estimate the effects of firearm laws on county-level firearm homicide. We used non-firearm homicide as a negative control to test for the specificity of the laws' effects. We used mixed effects Poisson regression models to account for repeated measures by county and allow counties to have unique intercepts; the likelihood ratio test for mixed effects versus a Poisson model indicated the need for random intercepts ( $p < 0.001$ ).

County-level percent poverty, unemployment, and African American males age 15–24, state-level incarceration rates, and law enforcement expenditures were included in the final model. Year fixed effects were used to account for national trends in homicide and county-level population was included as an offset to generate incident rate ratios (IRRs). Additionally, models were run with and without a county-level proxy for firearm ownership (the ratio of firearm suicide to all suicide). Analyses were conducted using Stata IC v 14.2 [21]. This study was deemed to be "not human subjects research" by the Johns Hopkins Bloomberg School of Public Health Institutional Review Board.

<sup>2</sup> States with no counties that met the inclusion criteria: Alaska, Arkansas, Hawaii, Idaho, Iowa, Maine, Mississippi, Montana, Nebraska, New Mexico, North Dakota, South Carolina, South Dakota, Vermont, West Virginia, and Wyoming



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**Table 1** Firearm laws and effective dates by state

State (# of counties)	Permit to purchase	Comprehensive background check only	Right to carry	Stand your ground	Violent misdemeanor restriction
Alabama (1)			Pre-1984	6/1/06	
Arizona (1)			4/13/94	4/24/06	
California (12)		1/1/91			1/1/91
Colorado (4)		7/1/13	5/17/03		
Connecticut (1)	10/1/95				
Delaware (1)		7/1/13			
Florida (9)			10/1/87	10/1/05	
Georgia (4)			8/25/89	7/1/06	
Illinois (7)	Pre-1984		1/5/14		1/1/95
Indiana (2)		Pre-1984–11/30/98	Pre-1984	7/1/06	
Kansas (1)			1/1/07	5/26/06	
Kentucky (1)			10/1/96	7/12/06	
Louisiana (2)			4/19/96	8/1/06	
Maryland (5)	10/1/13	10/1/96–10/1/13			10/1/03
Massachusetts (6)	Pre-1984				
Michigan (4)	Pre-1984		7/1/01	10/1/06	
Minnesota (4)			5/28/03		10/1/03
Missouri (3)	Pre-1984–8/28/07		2/26/04	8/28/07	
Nevada (1)			10/1/95	10/1/11	
New Hampshire (1)			Pre-1984	11/13/11	
New Jersey (13)	Pre-1984				
New York (14)	Pre-1984				Pre-1984
North Carolina (2)	Pre-1984		12/1/95	12/1/11	
Ohio (6)			4/8/04		
Oklahoma (1)			1/1/96	11/1/06	
Oregon (3)		8/9/2015	1/1/90		
Pennsylvania (8)		10/11/95	6/17/89	8/29/11	
Rhode Island (1)		Pre-1984	Pre-1984		
Tennessee (2)		5/10/94–11/1/98	10/1/96	5/22/07	
Texas (6)			1/1/96	9/1/07	
Utah (1)			5/1/95	3/1/94	
Virginia (3)			5/5/95		
Washington (4)		12/4/14	Pre-1984		
Wisconsin (2)			11/1/11		
Total states with law during study period (total # of changes)	9 (3)	10 (9)	27 (22)	18 (18)	5 (4)

**Results**

Table 1 presents the laws included in the study and the associated effective dates by state for those states with counties that met our inclusion criteria.

Table 2 presents the effects of the firearm policies we examined on firearm homicide in large, urban counties after controlling for identified covariates. PTP laws were associated with a 14% reduction in firearm homicide (IRR = 0.86, 95% CI 0.82–0.90). CBC-only laws were

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Association between Firearm Laws and Homicide in Urban Counties

**Table 2** Effects of firearm laws on firearm homicide in large, urban U.S. counties, 1984–2015

	IRR <sup>a</sup>	95% CI <sup>b</sup>
Permit to purchase	0.86	0.82–0.90
Comprehensive background check only	1.16	1.13–1.18
Right to carry	1.04	1.02–1.06
Stand your ground	1.07	1.05–1.10
Violent misdemeanor prohibitions	1.14	1.12–1.17
County-level % population African American male youth	1.53	1.49–1.57
County-level poverty rate	1.00	1.00–1.00
County-level unemployment rate	1.00	1.00–1.01
State-level incarceration rate	1.00	1.00–1.00
State-level law enforcement expenditures	0.99	0.99–0.99

The model also included year fixed effects

<sup>a</sup> Incidence rate ratio<sup>b</sup> 95% confidence interval

associated with a 16% increase in firearm homicide (IRR = 1.16, 95% CI 1.13–1.18). RTC laws were associated with a 4% increase in firearm homicide (IRR = 1.04, 95% CI 1.02–1.06). SYG laws were associated with a 7% increase in firearm homicide (IRR = 1.07, 95% CI 1.05–1.10). VM laws were associated with a 14% increase in firearm homicide (IRR = 1.16, 95% CI 1.12–1.17). When we included the proxy for county-level firearm ownership, there were negligible differences in the point estimates; however, the firearm ownership proxy itself was associated with a 37% increase in firearm homicide (IRR = 1.37, 95% CI 1.26–1.49).

Because of the IRR estimates for CBC-only and VM laws were in the direction opposite to our hypotheses, we also tested the effects of 1-, 2-, and 3-year leads and lags of the laws. These estimates reveal firearm homicide rates trending upward in the years immediately prior to CBC-only (Fig. 1) and VM laws (Fig. 2) going into effect with statistically significant increased firearm homicide rates 1 year prior to the laws' introduction. The IRRs were above 1.0 each year following the introduction of CBC-only and VM laws, but leveled off for CBC-only and were essentially the same as the 1-year lead for VM laws.

Table 3 presents the effects of the same set of firearm policies on non-firearm homicide rates. None of the firearm policy variables of interest were associated with changes in non-firearm homicide, supporting the specificity of the laws' effects. When we included the proxy for county-level firearm ownership, there were

negligible differences in the point estimates; however, the firearm ownership proxy itself was associated with an 18% reduction in non-firearm homicide (IRR = 0.82, 95% CI 0.73–0.92).

## Discussion

This study is the first study to our knowledge that examines the impact of PTP laws in large, urban counties where firearm homicide is more likely to occur. Our study also is the first to separate the impacts of CBC laws from PTP to understand how CBC laws affect firearm homicide independent from a permitting mechanism. Our study also examined the effects of other firearm-related policies on firearm homicide.

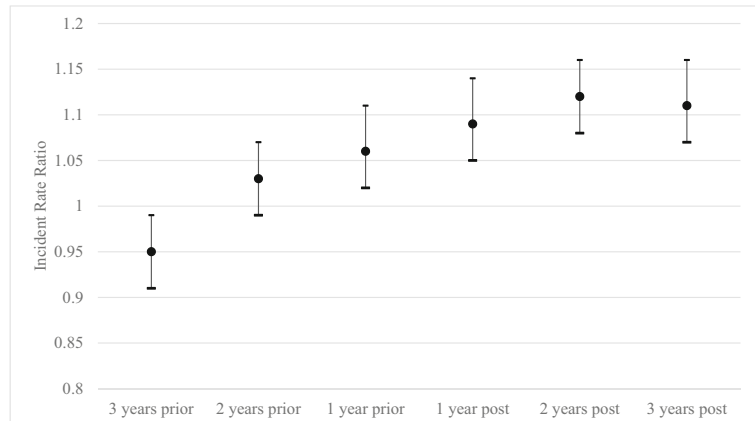
Our results are consistent with previous research finding that PTP reduces firearm homicides without increasing homicides by other means. However, we saw no benefit of a CBC system without a PTP law. It is possible that the application process required to obtain a permit, which puts the purchaser directly in contact with law enforcement, acts to hold potential purchasers more accountable and reduces the likelihood of straw purchases made on behalf of prohibited persons. The added time to conduct the background check at the local level may also make it easier to identify and screen out prohibited individuals who may be at increased risk of using that firearm to commit a homicide. Additionally, the built-in waiting period as part of the permitting process may prevent impulsive firearms purchases.

Our study suggests an increased risk of firearm homicide in large, urban counties associated with enactment of RTC laws which is consistent with previous research conducted at the state level. Counties in states with RTC laws experienced a 4% increase in firearm homicide relative to counties in states with more restrictions on the issuance of concealed carry weapons permits. Future research should explore whether specific elements of RTC laws, or lack thereof, have differential impacts on firearm homicide. For example, some RTC states allow law enforcement to deny issuing a concealed carry permit based on "dangerousness," or require a demonstration of proficiency. These differences can inform policy discussions around which elements, if any, may mitigate the harmful effects of expanded carrying of loaded, concealed firearms by civilians.

Our findings related to the effects of SYG laws are also consistent with previous research on the effects of



**Fig. 1** Effects of CBC-only laws on firearm homicide 1-, 2-, and 3-year pre- and post-enactment



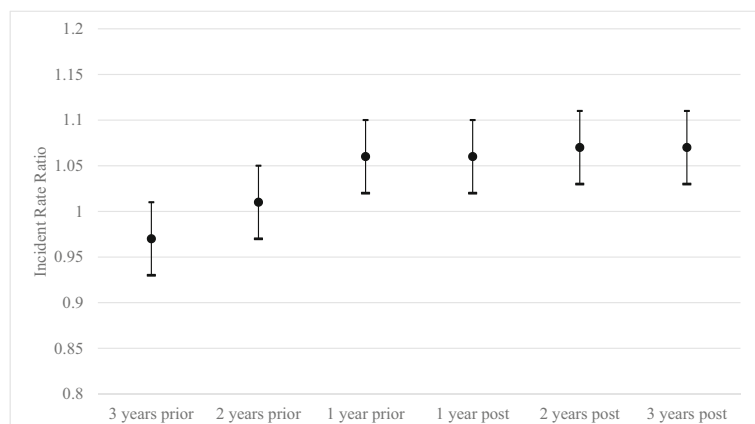
these laws on state-level firearm homicide [12, 13]. Counties in states with SYG laws experienced a 7% increase in firearm homicide. SYG laws are common in states with RTC laws and a high prevalence of gun ownership. Removing a duty to retreat in the context of populations with many armed individuals appears to increase firearm homicide.

In contrast to recent research finding protective effects of prohibitions for violent misdemeanants on intimate partner homicide [15], our study found increased risk of firearm homicide in counties of states with VM laws. However, the increased IRR for firearm homicide associated with VM laws in the year prior to the effective date suggests that the conditions influencing the passage of VM laws may increase firearm homicides. Identifying and controlling for such factors is necessary to generate unbiased estimates of the VM law effects. Future research should explore the effects of VM laws on firearm homicide in suburban and rural counties.

The increase in firearm homicide associated with CBC-only laws should be explored further. It is possible

that CBC-only laws are harmful; however, we have not identified a plausible theory to explain how requiring a prospective firearm purchaser to undergo a background check would result in increased homicide rates. It is possible that states experiencing historically high rates of firearm homicide during the late 1980s and early 1990s were more likely to implement CBC-only laws to reduce violence. If these states then experienced slower declines in firearm homicide compared to states that did not pass these laws, the CBC-only laws would appear harmful in our analysis. The upward trend in the IRRs for CBC-only laws in the 3 years prior to implementation, and the statistically significant increased rate for CBC-only laws in the year prior, suggests there may be an endogenous relationship between CBC-only laws and firearm homicide such that states may have passed these laws in response to increasing rates of firearm homicide. The lack of any beneficial effect of CBC-only laws could also reflect issues related to enforcement of CBC-only laws. The enforceability challenges associated with CBC-only laws are beginning to be

**Fig. 2** Effects of VM laws on firearm homicide 1-, 2-, and 3-year pre- and post-enactment



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Association between Firearm Laws and Homicide in Urban Counties

**Table 3** Effects of firearm laws on non-firearm homicide in large, urban U.S. counties, 1984–2015

	IRR <sup>a</sup>	95% CI <sup>b</sup>
Permit to purchase	1.04	0.97–1.13
Comprehensive background check only	0.97	0.94–1.01
Right to carry law	1.03	1.00–1.06
Stand your ground	1.01	0.97–1.04
Violent misdemeanor prohibitions	0.99	0.96–1.02
County-level % population African American male youth	1.52	1.47–1.58
County-level poverty rate	1.01	1.00–1.02
County-level unemployment rate	0.99	0.99–1.00
State-level incarceration rate	1.00	1.00–1.00
State-level law enforcement expenditures	1.00	1.00–1.00

The model also included year fixed effects

<sup>a</sup> Incidence rate ratio<sup>b</sup> 95% confidence interval

documented.[22, 23] PTP laws may be easier to comply with and enforce than CBC-only laws since sellers can only transfer a firearm to someone who has a valid permit. Future research should expand the inclusion criteria for county population size and/or urbanization. This may also allow for more states to be represented in the data and produce more robust results. Within PTP and CBC-only laws, there remain differences among states, including standards for obtaining the permit, duration of the permit, and whether a point-of-sale background check is also required in PTP states. These issues warrant additional research. Additionally, future research should explore the effects of these laws on firearm suicide at the county level.

There are some limitations to our study. As with all observational studies, there is a risk of selection bias as states choose whether to pass a policy or not. However, we attempted to minimize this bias by including county-level demographics and pre-law enactment data to estimate baseline trends. Importantly, our assessment of the effects of CBC-only and VM laws in the years prior to the laws going into effect underscores the challenges of studies of this type where omitted variables may bias estimates of the laws' impacts. This study only includes counties classified as the most urban with populations of 200,000 or greater across the entire study period. These counties may be different from those not included. Our inclusion criteria also excluded counties that may have had a population of 200,000 or more at some point

during the study period but did not maintain that population level across the entire study period. However, limiting our sample to large, urban counties where firearm homicide is more likely to occur would give us more reliable estimates of policy effects. Our study relied on two covariates that were not readily available at the county level. For example, law enforcement expenditures were only available at the state level.

This study adds to the growing body of evidence that PTP laws are associated with reductions in firearm homicide. States that are considering a range of policies related to the transfer of firearms should consider a handgun purchaser licensing system through a PTP law as a mechanism to reduce firearm homicide.

**Acknowledgements** This research was supported by a grant from The Joyce Foundation to the Johns Hopkins Center for Gun Policy and Research <http://www.joycefdn.org/grants>).

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Association between Firearm Laws and Homicide in Urban Counties

C.K. Crifasi et al.

# Correction to: Association between Firearm Laws and Homicide in Urban Counties

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<https://doi.org/10.1007/s11524-018-0273-3>

**Correction to: Journal of Urban Health (2018) 95(3):383–90. DOI**

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The authors would like to publish this erratum to correct estimates generated from regression analyses due to errors discovered in the coding of some state laws. The following corrections to the laws in Table 1 are warranted: 1) Michigan no longer requires a permit-to-purchase for handgun sales by licensed dealers effective December 18, 2012 (permits are still necessary for private transfers); 2) Connecticut enacted a law prohibiting firearm purchases for violent misdemeanants effective October 1, 1994; and 3) the implementation dates for violent

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misdemeanant prohibition laws are January 1, 1996 for Illinois, October 1, 1996 for Maryland, and August 1, 2003 for Minnesota. We regret that we did not identify the errors prior to publication. The data presented below reflect the study's findings after these corrections were made. Changes to the point estimates for the laws' association with homicide rates were minor, and the direction and significance level of the estimates for the effects of the laws studied on firearm homicide did not change. The largest change was to the IRR for laws prohibiting firearms for violent misdemeanants' association with firearm homicide rates, which went from 1.14 to 1.24.

**Table 1**

Firearm Laws and Effective Dates by State.

State (# of Counties)	Permit to Purchase	Comprehensive Background Check Only	Right to Carry	Stand Your Ground	Violent Misdemeanor Restriction
Alabama (1)			pre-1984	6/1/06	
Arizona (1)			4/13/94	4/24/06	
California (12)		1/1/91			1/1/91
Colorado (4)		7/1/13	5/17/03		
Connecticut (1)	10/1/95				10/1/94
Delaware (1)		7/1/13			
Florida (9)			10/1/87	10/1/05	
Georgia (4)			8/25/89	7/1/06	
Illinois (7)	pre-1984		1/5/14		1/1/96
Indiana (2)		pre-1984–11/30/98	pre-1984	7/1/06	
Kansas (1)			1/1/07	5/26/06	
Kentucky (1)			10/1/96	7/12/06	
Louisiana (2)			4/19/96	8/1/06	
Maryland (5)	10/1/13	10/1/96–10/1/13			10/1/96
Massachusetts (6)	pre-1984				
Michigan (4)	pre-1984–12/18/12		7/1/01	10/1/06	

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State (# of Counties)	Permit to Purchase	Comprehensive Background Check Only	Right to Carry	Stand Your Ground	Violent Misdemeanor Restriction
Minnesota (4)			5/28/03		8/1/03
Missouri (3)	pre-1984–8/28/07		2/26/04	8/28/07	
Nevada (1)			10/1/95	10/1/11	
New Hampshire (1)			pre-1984	11/13/11	
New Jersey (13)	pre-1984				
New York (14)	pre-1984				pre-1984
North Carolina (2)	pre-1984		12/1/95	12/1/11	
Ohio (6)			4/8/04		
Oklahoma (1)			1/1/96	11/1/06	
Oregon (3)		8/9/2015	1/1/90		
Pennsylvania (8)		10/11/95	6/17/89	8/29/11	
Rhode Island (1)		pre-1984	pre-1984		
Tennessee (2)		5/10/94–11/1/98	10/1/96	5/22/07	
Texas (6)			1/1/96	9/1/07	
Utah (1)			5/1/95	3/1/94	
Virginia (3)			5/5/95		
Washington (4)		12/4/14	pre-1984		
Wisconsin (2)			11/1/11		
Total states with law during study period (total # of changes)	9 (3)	10 (9)	27 (22)	18 (18)	6 (5)

**ABSTRACT.**

1. The sentencing beginning “PTP laws were associated with...” should be replaced with a sentence that reads “PTP laws were associated with an 11% reduction in

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 firearm homicide in large, urban counties (IRR = 0.89, 95% CI 0.85—0.93).”

## RESULTS.

1. Table 1 should be deleted and replaced with the corrected Table 1 below.
2. Table 2 should be deleted and replaced with the corrected Table 2 below.

**Table 2**

Effects of Firearm Laws on Firearm Homicide in Large, Urban U.S. Counties, 1984–2015.

	IRR <sup>a</sup>	95% CI <sup>b</sup>
Permit to Purchase	0.89	0.85–0.93
Comprehensive Background Check only	1.10	1.08–1.13
Right to Carry	1.07	1.05–1.09
Stand Your Ground	1.08	1.05–1.10
Violent Misdemeanor prohibitions	1.24	1.21–1.27
County-level % Population African American Male Youth	1.55	1.51–1.60
County-level Poverty Rate	1.00	1.00–1.00
County-level Unemployment Rate	1.00	1.00–1.01
State-level Incarceration Rate	1.00	1.00–1.00
State-level Law Enforcement Expenditures	0.99	0.99–0.99
<sup>a</sup> Incidence Rate Ratio		
<sup>b</sup> 95% Confidence Interval		
Note: The model also included year fixed effects		

3. The second paragraph (describing the regression results in Table 2) should be deleted and replaced with the following: “Table 2 presents the effects of the firearm policies we examined on firearm homicide in large, urban counties after controlling for identified covariates. PTP laws were associated with an 11% reduction in firearm homicide (IRR = 0.89, 95% CI 0.85—0.93). CBC-only laws were associated with a 10% increase in firearm homicide (IRR = 1.10, 95% CI 1.08—1.13). RTC laws were associated with a 7% increase in firearm homicide (IRR = 1.07, 95% CI 1.05—1.09). SYG laws were associated with an 8% increase in firearm homicide (IRR = 1.08, 95% CI 1.05—1.10). VM laws were associated with

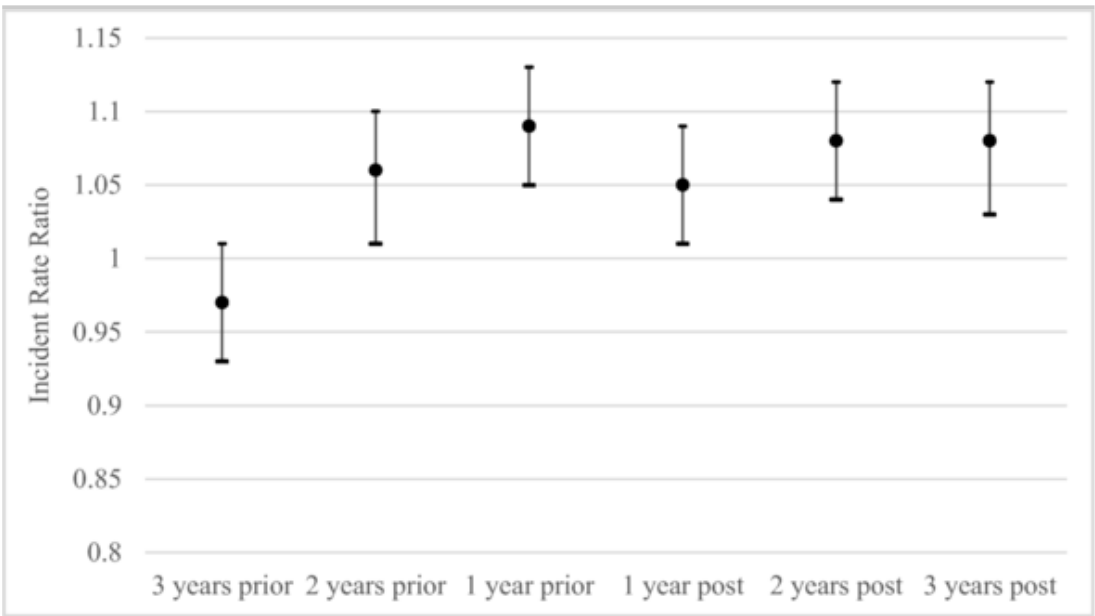
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a 24% increase in firearm homicide (IRR = 1.24, 95% CI 1.21—1.27). When we included the proxy for county-level firearm ownership, there were negligible differences in the point estimates; however, the firearm ownership proxy itself was associated with a 40% increase in firearm homicide (IRR = 1.40, 95% CI 1.29—1.53).”

4. Figure 1 should be deleted and replaced with the corrected Fig. 1 below.

**Fig. 1**

Effects of CBC-only laws on firearm homicide 1, 2, and 3 years pre- and post-enactment.



5. Figure 2 should be deleted and replaced with the corrected Fig. 2 below.

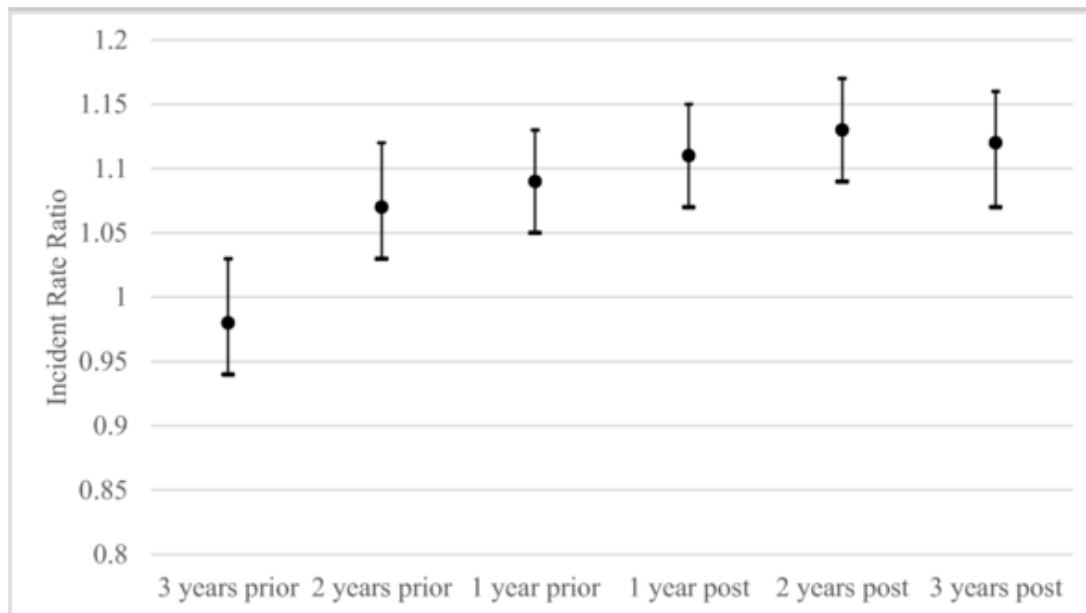
**Fig. 2**

Effects of VM laws on firearm homicide 1, 2, and 3 years pre- and post-enactment.



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6. Table 3 should be deleted and replaced with the corrected Table 3 below.

**Table 3**

Effects of Firearm Laws on Non-Firearm Homicide in Large, Urban U.S. Counties, 1984–2015.

	IRR <sup>a</sup>	95% CI <sup>b</sup>
Permit to Purchase	1.02	0.95–1.09
Comprehensive Background Check only	0.94	0.91–0.99
Right to Carry law	1.04	1.01–1.07
Stand Your Ground	1.01	0.98–1.05
Violent Misdemeanor prohibitions	1.04	1.00–1.08
County-level % Population African American Male Youth	1.53	1.48–1.59
County-level Poverty Rate	1.01	1.00–1.02
County-level Unemployment Rate	0.99	0.99–1.00
State-level Incarceration Rate	1.00	1.00–1.00
State-level Law Enforcement Expenditures	1.00	1.00–1.00
<sup>a</sup> Incidence Rate Ratio		
<sup>b</sup> 95% Confidence Interval		
Note: The model also included year fixed effects		

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7. The last paragraph (presenting results of Table 3) should be deleted and replaced with the following: “Table 3 presents the effects of the same set of firearm policies on non-firearm homicide rates. PTP and SYG were not associated with statistically significant changes in non-firearm homicide. CBC-only laws were associated with a 6% decrease in non-firearm homicide (IRR = 0.94, 95% CI 0.91—0.98). RTC laws were associated with a 4% increase in non-firearm homicide (IRR = 1.04, 95% CI 1.01—1.07). When we included the proxy for county-level firearm ownership, there were negligible differences in the point estimates; however, the firearm ownership proxy itself was associated with a 17% reduction in non-firearm homicide (IRR = 0.83, 95% CI 0.73—0.93).”

## **DISCUSSION.**

1. The second sentence of the third paragraph should be deleted and replaced with the following: “Counties in states with RTC laws experienced a 7% increase in firearm homicide relative to counties in states with more restrictions on the issuance of concealed carry weapons permits.”

2. The second sentence of the fourth paragraph should be deleted and replaced with the following: “Counties in states with SYG laws experienced an 8% increase in firearm homicide.”

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## **Declaration Exhibit 8**

# The Initial Impact of Maryland's Firearm Safety Act of 2013 on the Supply of Crime Handguns in Baltimore



CASSANDRA K. CRIFASI, SHANI A.L. BUGGS,  
SEEMA CHOKSY, AND DANIEL W. WEBSTER

*This study assesses the impact of Maryland's Firearm Safety Act (FSA) of 2013 on indicators of diversion of handguns to prohibited persons. Interrupted time-series analyses were conducted, and the findings were supplemented by results from a survey of men on parole and probation regarding Baltimore's underground gun market. The FSA was associated with an 82 percent reduction in police recovery of handguns with strong indicators of diversion (IRR=0.18,  $p=.005$ ). Forty-one percent of survey respondents reported having more difficulty getting a handgun after the FSA because of increased cost, lack of trusted sources, or people less willing to engage in straw purchases on their behalf. These findings are consistent with the theory that the FSA reduces the diversion of handguns into the underground market.*

**Keywords:** underground market, gun policy, diversion

The potential effectiveness of gun sales laws rests not only on individuals at high risk of committing harm with guns being prohibited from purchasing or possessing guns, but also on how well the laws prevent the diversion of guns to prohibited persons. Various laws have been put in place to prevent the diversion of guns to prohibited persons. The foundation of these laws includes requirements that purchasers pass background checks and sellers main-

tain records of purchaser information, dates of sale, and the specifics of the guns, including serial numbers. These requirements allow law enforcement to trace guns they recover from criminal suspects or crime scenes to the original retail sale and, in some cases, even subsequent sales.

Research demonstrates that laws designed to prevent such diversion by increasing the accountability of gun sellers and buyers are as-

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sociated with lower levels of guns diverted to prohibited persons in cross-sectional studies. These laws include permit-to-purchase (PTP) laws for handguns, the extension of background check requirements to gun transfers between private parties, mandatory reporting of lost or stolen guns by owners, and strong regulation and oversight of licensed gun dealers (Webster, Vernick, and Bulzacchelli 2009; Webster et al. 2013; Pierce, Braga, and Wintemute 2015).

Current federal laws include many weaknesses that allow guns to be diverted to prohibited persons with relatively little risk to sellers (Webster and Wintemute 2015). Many states have passed laws that attempt to address deficiencies in federal law by extending background checks and record-keeping requirements—and in some cases gun theft reporting requirements—to transfers made by private gun owners. Nine states and the District of Columbia also have some form of licensing system for handgun purchasers that outlaws the transfer of a handgun to anyone who does not have a valid PTP. Because scofflaw retail gun dealers can potentially divert large quantities of guns to criminals over time, and federal law and oversight are somewhat weak, some states also have their own regulation of licensed gun dealers.

Studies of the diversion of guns for criminal use necessarily rely on crime gun trace data from the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF). These data provide information on the state of retail sale, state of crime involvement, whether the retail purchaser and the criminal possessor were the same person, and the dates the guns were first sold and then recovered by law enforcement. These dates allow ATF to generate a time-to-crime (TTC) for traced guns. The national average TTC for traced guns in 2015 was 10.48 years; Maryland's was 12.39 years (ATF 2016a). A gun recovered within one year of retail sale indicates to law enforcement that the gun was likely purchased with the intent of diverting that gun to a prohibited person (ATF 2002). The use of crime gun trace data to evaluate the diversion of guns to prohibited persons has gained increasing research support and validity, and supply-side constraints, such as requiring a PTP for hand-

gun purchasers, are associated with reduced likelihood of the diversion of guns (Braga et al. 2012; Webster, Vernick, and Hepburn 2001).

Because most of the relevant laws have been in place for decades and few cities consistently traced the origins of the guns they recovered in crime before the late 1990s, opportunities to examine whether changes in these laws result in changes in indicators of diversion of guns for criminal use have been limited. Recent studies of changes in PTP handgun laws in Connecticut, which implemented its law along with universal background check requirements in 1995, and Missouri, which repealed its PTP law in 2007, provide evidence that these laws reduced criminal access to guns and homicides committed with guns. Using analytic methods to create so-called synthetic controls for Connecticut's gun and nongun homicide rates to estimate counterfactuals for the first ten years following the implementation of the law requiring background checks and PTP for all handgun purchases, researchers estimated that the law was associated with a 40 percent reduction in gun homicide rates over the first ten years it was in place (Rudolph et al. 2015). A separate study estimated that Missouri's repeal of its PTP law was associated with a 14 percent increase in murders during the first five full years after the law's repeal, with the effects specific to events involving guns (Webster, Crifasi, and Vernick 2014). Missouri's repeal of its PTP handgun law was also followed by a twofold increase in the percentage of crime guns with very short intervals between retail sale and crime involvement and a large increase in the share of crime guns from sales originating within Missouri versus other states (Webster et al. 2013). Another study provides evidence that the repeal was associated with increased risk of law enforcement officers being shot in the line of duty in ways consistent with PTP laws being protective against criminal gun use (Crifasi, Pollack, and Webster 2015).

In 1996, Maryland enacted a law that made all handgun transfers, including those made by a private seller, contingent on the purchaser passing a background check. In 2013, Maryland lawmakers enacted the Firearm Safety Act (FSA), which has multiple components that could potentially reduce diversion of guns into

the hands of prohibited persons. These include requiring a PTP for anyone purchasing a handgun from either a licensed gun dealer or a private owner, expanding authority for state police to act against gun dealers found to have violated state gun sales laws (such as fines or license suspension or revocation), and mandating that gun owners report within seventy-two hours any theft or loss of a regulated gun. Additionally, the FSA bans the sale of assault rifles, limits magazine size to ten rounds, and bars persons who receive probation before judgment for violent crimes from possessing guns.

The PTP provision requires prospective purchasers to obtain a license issued by Maryland State Police, contingent on their passing a background check and completing a four-hour safety training course conducted by an approved and registered instructor. Individuals who were registered handgun owners before the FSA went into effect are exempt from the safety training requirement. Applicants for the license must also be fingerprinted during the application process by certified vendors that submit digital images of the prints to the Maryland State Police.

This article assesses the impact of Maryland's FSA of 2013 on the underground gun market in Baltimore. We analyzed data from handguns recovered by police and submitted for tracing to assess whether the new law was associated with fewer crime handguns recovered shortly after a retail sale from someone other than the retail purchaser, and an increase in the number of recovered crime handguns initially purchased in other states. To assess the perceived impact of the FSA on the underground gun market, we supplemented the analysis of crime handgun trace data with a qualitative evaluation of knowledge of the FSA and the perception among individuals prohibited from purchasing or possessing guns—Baltimore City residents currently on parole or probation—of changes in gun accessibility following the implementation of the FSA.

## METHODS

Data on guns recovered by police and submitted for tracing were obtained from the Baltimore Police Department (BPD) for the period from January 1, 2007, through September 30,

2015. When a gun trace was successful, the data included information on original sale date and purchaser, recovery date, possessor, and the type of incident in which the gun was recovered. Gun trace data were excluded from our analyses if the incident in which the gun was recovered was recorded as “found/recovered property” or as “safe-keeping/turn in/buy-back.” Such weapons were excluded so that only guns recovered in a crime were included in the dependent variable, making the analysis as specific as possible in testing the law's effect on the diversion of guns to criminals. Additionally, because most guns used in crime are handguns, and the FSA specifically licenses handgun purchasers, analyses were restricted to handguns.

We obtained data from Maryland State Police by month and year on the number of gun registration applications approved during the study period to have a proxy measure for the number of handguns also at risk for diversion to the underground gun market during the month and year a crime handgun was sold.

Because of legal restrictions on the sharing of crime gun trace data, simply no data are available at this granular level to generate an appropriate city-level comparison. The only available data are state-level reports of crime gun recoveries published by ATF; these reports, however, do not distinguish between types of guns (handgun or long gun), and they do not provide information on source state for short TTC guns, on whether the criminal possessor was the original purchaser, or in what month the gun was sold. These data elements are key to evaluating the effect of the FSA on the diversion of guns into the underground market. Thus, though we do present some state-level descriptive data, our time-series analyses are restricted to crime handguns recovered by police in Baltimore City and submitted for tracing.

## Analytic Methods

We used an interrupted time-series design to test whether any changes were significant in key indicators of handgun trafficking or diversion of handguns for criminal purposes coincident with the implementation of the FSA on October 1, 2013. Similar to studies on gun trafficking or diversions of guns to individuals who

used those guns in crime, ours examined two trafficking indicators—short TTC following a retail sale and the percentage of crime guns initially sold by out-of-state retailers.

We used four outcomes with monthly time series: the number of handguns originally sold in Maryland with a TTC of less than one year; the number of handguns originally sold in Maryland with a TTC of less than one year and the criminal possessors were not the purchasers of record; the number of handguns originally sold by out-of-state gun dealers; and the number of handguns originally sold by out-of-state gun dealers and the criminal possessors were not the purchasers of record.

For the less than one year TTC outcomes, observations were based on the month the handgun was sold, which enabled us to categorize whether a handgun used in crime had been sold under FSA rules. Measures that involved handguns recovered from someone other than the lawful purchaser allowed for a direct assessment of the FSA's effect on the diversion of handguns for criminal purposes. Our hypothesis was that the FSA would be associated with reductions in measures of guns that originated in Maryland. If that proved true, we hypothesized a modest increase in measures of guns originating outside of Maryland as individuals seeking handguns for criminal use pursued alternatives to new handguns originating from retail sales in Maryland.

Interrupted time-series analyses were performed on crime handgun trace data to discern whether the implementation of the FSA was associated with changes in the outcomes described above. Negative binomial regression models were used due to overdispersion in the data (likelihood ratio test of  $\alpha=0$ ,  $p<.05$ ). We controlled for baseline trends in the outcome variables in two ways, with year fixed effects and a linear trend term. Indicator variables for calendar month were evaluated for inclusion to adjust for potential seasonality in the outcome variables.

The number of less than one year TTC handguns recovered by police may be influenced by policing practices that vary over time with respect to the degree to which arrests for illegal gun possession are prioritized. Therefore, we controlled for variation in the mean number

of all handguns recovered by the BPD during the twelve months following a sales month observation,  $t$ . Because of the short observation period following the law's implementation and the truncated follow-up period such that handguns sold after October 1, 2014, have less than one year in which they would be at risk of recovery by the BPD, we included a covariate to measure exposure for the number of months a handgun was at risk of being recovered in a crime.

Because of the limited control variables available, and the lack of an appropriate comparison jurisdiction with the same granular-level crime gun trace data, we evaluated our data's pre-intervention stationarity using autoregressive integrated moving average modeling. The autoregressive component to our outcome variables was significant; however, the inclusion of monthly gun recoveries accounted for the lack of stationarity and made the autoregressive component nonsignificant. We were therefore confident in our use of an interrupted time-series model with negative binomial regression controlling for monthly crime gun recoveries.

We also ran the models with and without a control for the number of gun registration applications approved during the month of a crime handgun's sale that originated in Maryland. An argument can be made for excluding approved gun applications from the regression models because it could partly mediate the effect of the FSA on handguns diverted for criminal use and bias estimates of the full effect of the new policies. We therefore present findings with and without controls for changes in the volume of gun purchase applications.

The estimated effects from the interrupted time-series analyses are presented as incident rate ratios (IRR) with 95 percent confidence intervals. Analyses were conducted using Stata IC version 14.2 (StataCorp 2015).

### Survey Methods

To assess awareness and perceived impact of the FSA among persons legally prohibited from purchasing or possessing guns, we included four FSA-specific questions in a multipart survey designed to appraise gun availability in the underground gun market in Baltimore. Using



a convenience sampling methodology, we administered the survey in May and June 2016 to 195 men on parole or probation in Baltimore. The selection was to identify persons with recent interaction with the criminal justice system that would prohibit them from purchasing or possessing a gun under Maryland state law.

Survey respondents were recruited outside parole and probation offices in Baltimore. Men who asserted that they were over the age of eighteen, currently on parole or probation, and Baltimore residents were invited to complete the survey after eligibility was determined via screening questions. All participants were anonymous volunteers. If an individual met the eligibility criteria and was interested in participating, research assistants escorted him to a semiprivate location where he received additional information and specific instructions about the study.

Both the informed consent process and the survey were self-administered using a closed-ended computerized survey instrument with audio assistance to ensure confidentiality and prevent issues of low literacy from affecting participation. This methodology allowed for uniform and anonymous collection of data related to the underground gun market that would be otherwise difficult to obtain. Research assistants, who were trained in participant recruitment, supervised the survey completion and provided technical assistance when needed. The survey process took approximately thirty minutes. The four survey items specifically related to the FSA asked whether respondents perceived that the new law affected the following factors:

- the difficulty of obtaining a gun generally,
- the cost of a gun,
- the willingness of another individual to buy a gun on the respondent's behalf (a straw purchaser), and
- the ease of finding a trusted source that would sell a gun to the respondent.

A respondent who answered yes, to indicate that the law made it more difficult to obtain a gun, was presented with a narrative text box to provide detail on how the law made obtaining

a gun more difficult. This study was approved by the Johns Hopkins Institutional Review Board.

## RESULTS

The results are comprised of an analysis of BPD's crime gun trace data and surveys of prohibited purchasers in Baltimore City.

### Crime Gun Trace Data

Over the study period, BPD submitted 21,546 guns for tracing. Of these, 6,520 were found guns or guns turned in by citizens and 5,476 were rifles or shotguns; these categories were excluded from the analysis. Data for 11,462 handguns that were connected to a criminal suspect, crime scene, or criminal investigation were submitted for tracing. More than half (55.6 percent) of the handguns were recovered in arrests for illegal handgun possession; 20.3 percent were recovered in drug-related arrests; and 17.8 percent were connected to some type of violent crime (see table 1).

Table 2 shows, by year, the total crime handguns recovered by BPD as well as the number and percentage that could be traced to the state of original retail sale. The number of handguns recovered and submitted for tracing declined through the study period. The proportion of handguns recovered by BPD that originated in Maryland hovered around 45 percent from 2007 to 2012, but declined gradually starting in 2013.

During the study period, Maryland State Police processed and approved 441,882 gun registration applications. Figure 1 presents the trend for the number of approved applications per month. A sharp increase occurred in late 2012, followed by a huge spike in purchase applications just before FSA implementation.

Figure 2 depicts a three-month moving average of the number of handguns that originated in Maryland and were recovered within one year of retail sale when the purchaser was someone other than the criminal possessor. The monthly count of crime handguns diverted within a year of retail sale hovered around a mean of two from 2009 through the first half of 2013 and then spiked in the third quarter of 2013, just before the FSA went into effect. The indicator then fell to less than one



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**Table 1.** Handguns Recovered, January 2007 to September 2015

Crime Category	Number (n=11,462)	Percentage with Offense Type Listed (n=11,131)
Assault	910	8.2
Carjacking	48	0.4
Illegal discharge of firearm	67	0.6
Discharge (police involved)	15	0.1
Domestic assault	15	0.1
Drug related	2,252	20.3
Handgun violation	6,191	55.6
Homicide or attempted homicide	289	2.6
Homicide or attempt (police involved)	33	0.3
Nonfatal shooting/attempt	584	5.2
Nonfatal shooting or attempt (police involved)	97	0.9
Property crime	106	1.0
Questionable death	49	0.4
Rape/sex offense	15	0.1
Other	166	1.5
Missing	331	

Source: Authors' calculations based on Baltimore Police Department crime gun trace data.

**Table 2.** Crime-Involved Handguns Recovered, January 2007 to September 2015

Year	Total Recovered: n	Traced to State of Retail Sale: n (percent)
2007	1,527	1,193 (78)
2008	1,383	1,046 (76)
2009	1,370	1,082 (79)
2010	1,308	1,027 (79)
2011	1,243	976 (79)
2012	1,202	1,012 (84)
2013	1,162	915 (79)
2014	1,238	929 (75)
2015 <sup>a</sup>	1,029	845 (82)
Total	11,462	9,025

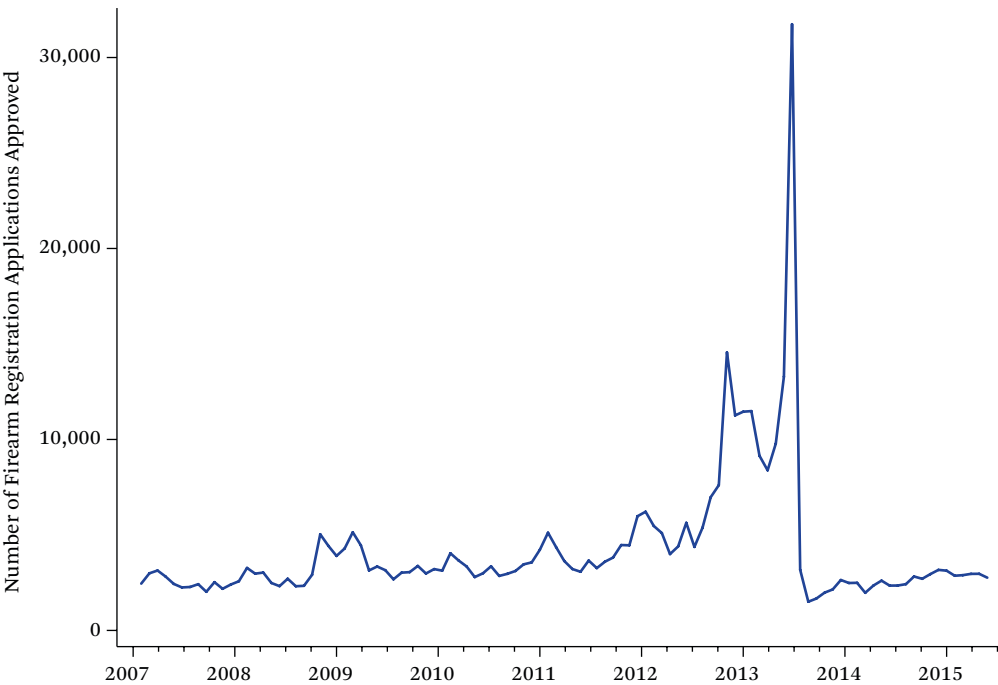
Source: Authors' calculations based on Baltimore Police Department crime gun trace data.

<sup>a</sup>Data through September 2015.

per month after the FSA went into effect on October 1, 2013 (see figure 2). Overall, the mean number of handguns per month with TTC of less than one year for the retail sales period before the FSA was 6.0 (SD=3.31), dropped to 2.58 (SD=1.08) during the first twelve months the FSA was in effect, and then increased to 4.25 (SD=2.25) for the period between October 2014 and September 2015.

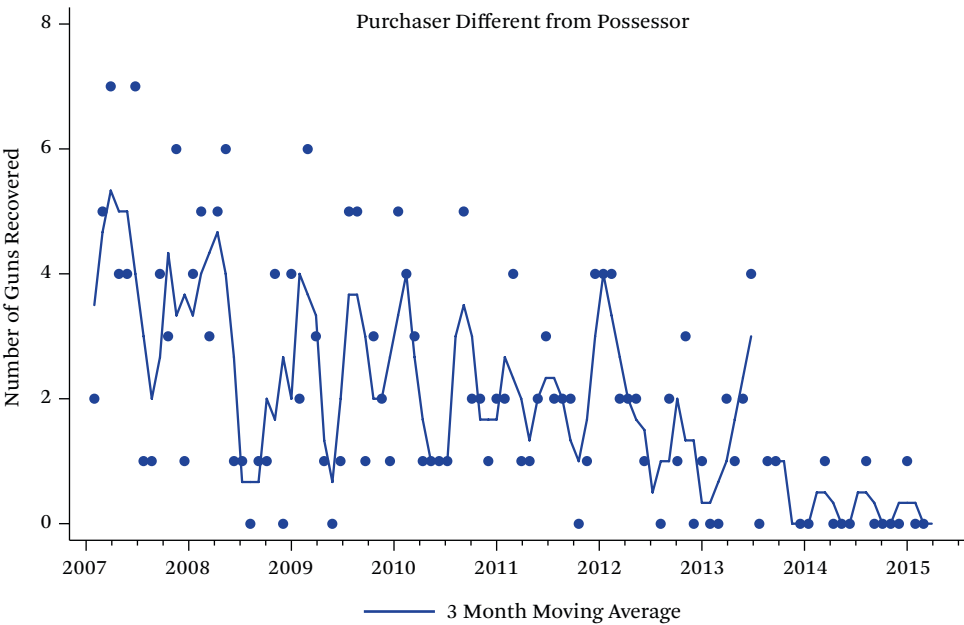
The results from the regression analyses are consistent with the hypothesis that the FSA would be protective against the diversion of guns into the underground market for criminal use (see table 3). For all handguns originally sold in Maryland that were recovered within one year of retail sale, the IRR for the FSA is 0.33 ( $p=.001$ ), which translates to a 67 percent decline in this outcome. The FSA was associ-

**Figure 1.** Firearm Registration Applications Approved in Maryland



Source: Authors' calculations based on Baltimore Police Department crime gun trace data.

**Figure 2.** Handguns Sold in Maryland and Recovered in Criminal Incidents



Source: Authors' calculations based on Baltimore Police Department crime gun trace data.

Note: Within one year of retail sale, purchaser different from possessor.

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**Table 3.** Estimated Effects of Maryland's Firearm Safety Act

Dependent Variable	FSA IRR (95 percent CI)	Overall Crime Gun Recoveries IRR (95 percent CI)	Linear Trend IRR (95 percent CI)
Guns sold in Maryland and recovered within one year of retail sale	0.33* (0.17 to 0.64)	1.03* (1.00 to 1.05)	1.00 (0.99 to 1.01)
Guns sold in Maryland and recovered within one year of retail sale and purchaser different from possessor	0.18* (0.05 to 0.60)	1.02 (0.99 to 1.06)	0.99 (0.98 to 1.01)
Guns sold outside Maryland	1.20 (0.61 to 2.37)	0.996* (0.99 to 1.00)	Year fixed effects used
Guns sold outside Maryland and purchaser different from possessor	1.13 (0.53 to 2.45)	0.996* (0.99 to 1.00)	Year fixed effects used

Source: Authors' calculations based on Baltimore Police Department crime gun trace data.

\* $p < .05$

**Table 4.** Estimated Effects of Maryland's Firearm Safety Act, Controlling for Volume

Dependent Variable	FSA IRR (95 percent CI, p)	Overall Crime Gun Recoveries IRR (95 percent CI, p)	Total MD Firearm Registration Applications Approved IRR (95 percent CI, p)	Linear Trend IRR 95 percent CI, p)
Guns sold in Maryland and recovered within one year of retail sale	0.41* (0.20 to 0.82)	1.02 (1.00 to 1.05)	1.00 (1.00 to 1.00)	0.99 (0.98 to 1.00)
Guns sold in Maryland and recovered within one year of retail sale and purchaser different from possessor	0.24* (0.069 to 0.84)	1.02 (0.98 to 1.05)	1.00 (1.00 to 1.00)	0.99 (0.97 to 1.00)

Source: Authors' calculations based on Baltimore Police Department crime gun trace data.

\* $p < .05$

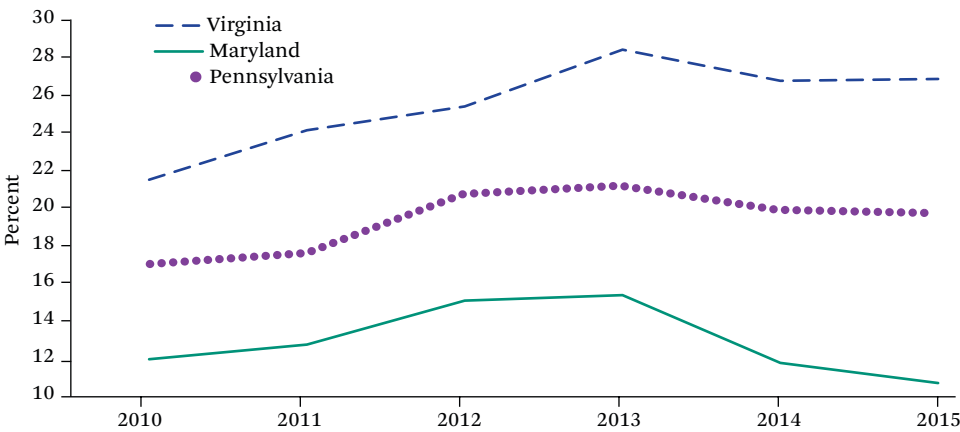
ated with an 82 percent reduction in the number of handguns originally sold in Maryland that were recovered within one year of retail sale and the purchaser was not the same as the possessor (IRR=.18,  $p=.005$ ); this is a key indicator that a gun was purchased with the intent of diverting it for criminal use.

Controlling for the volume of gun registration applications approved in the month of a crime gun's sale (that is, how many handguns were at risk of being diverted for criminal pur-

poses at the time a crime handgun was sold) did not remarkably affect the magnitude or significance of the estimates for the FSA (see table 4). After controlling for pre-FSA trend, the estimated increase in the number of handguns recovered by police that were originally sold outside of Maryland was 20 percent but was not statistically significant (see table 3).

Figure 3 depicts the percent of guns (includes handguns and long guns) recovered in crime within one year of retail sale that were

**Figure 3.** In-State Crime Guns Sold Within Year of Crime



Source: Authors' calculations based on ATF 2016a.

originally sold in the state of recovery for Maryland, Pennsylvania, and Virginia. These numbers are not to the same granular level as that of the time series for Baltimore City. The state-level data do not differentiate between type of gun and do not contain information on whether the purchaser was the criminal possessor or the month of sale. All three states were on an upward trajectory for the percentage of in-state crime guns with a TTC of less than one year. However, after 2013, although the indicators for Pennsylvania and Virginia leveled off, Maryland saw a 30 percent decline (see figure 3). This data provides further support to the hypothesis that the FSA reduced the diversion of guns into the underground market.

### Parolee-Probationer Surveys

In May and June 2016, we fielded an audio-assisted computer-based survey of men on parole and probation in Baltimore. Our research teams approached 448 men and screened 251 for eligibility (55 percent). Of those who were screened, 216 were eligible to participate and 195 completed the survey on their experiences with the underground gun market in Baltimore (91 percent).

Individuals completing the survey reported significant experiences with gun violence and the underground gun market. Sixty-three percent had been shot at one or more times in their lives, 48 percent had been shot at multiple times. Of the 122 men who had been shot

at, 43 percent had suffered gunshot wounds (see table 5). The most common reasons respondents had been most recently jailed were related to violence (32 percent) or drugs (28 percent).

Of the 195 respondents, 41 percent stated that it was more difficult to obtain a gun after the passage of the FSA (see table 6). Forty percent perceived that the new gun law affected the cost of guns in the underground market. In referencing how the FSA affected cost, respondents stated that, for instance, the law “made guns more expensive.” The law was also perceived to have affected access to individuals willing to purchase guns on behalf of the survey respondents (34 percent) and access to a trusted source who would sell guns to the respondents (25 percent) (see table 6). Respondents made comments related to the difficulty of finding trusted sources such as “u [*sic*] have to have a permit” or “cause you don’t always know the person thats [*sic*] selling the gun.”

### DISCUSSION

Several components of Maryland’s Firearm Safety Act of 2013—a handgun purchaser licensing requirement, mandatory lost or stolen gun reporting by gun owners, and stronger regulation of retail gun dealers—were designed principally to prevent the diversion of handguns to prohibited persons and those seeking to acquire guns for criminal purposes. Findings from the analysis of handguns recov-

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**Table 5.** Demographic Characteristics of Survey Respondents

Demographics	N=195	Percent
Age (mean [range])	38.7 (19–69)	
<b>Race (n=179)</b>		
African American	144	80
White	23	13
Multiracial	12	7
<b>Relationship status (n=192)</b>		
Never married	153	80
Married	19	10
Previously married	20	10
<b>Currently employed (n=192)</b>		
No	142	74
Yes	50	26
<b>Education (n=191)</b>		
Middle school	17	9
High school	95	49
GED	42	22
Some college	29	15
Associate’s degree or higher	8	4
<b>Ever shot at (n=192)</b>		
Never	70	37
Once	28	15
Multiple times	91	48
<b>Ever hit when shot at (n=122)</b>		
Yes	53	43
No	69	57
<b>Last six months, ever carried or used a gun</b>		
Did not carry or use a gun	130	67
Carried but not used	34	17
Pointed or shown gun	6	3
Fired in the air	7	4
Fired at an individual	6	3
Other	12	6

Source: Authors’ calculations based on underground gun market survey.

ered by Baltimore police are consistent with the theory that the FSA suppressed diversions of guns for criminal use. Indeed, the FSA was associated with an 82 percent reduction in the risk of a handgun being recovered from a criminal possessor who was not the retail purchaser less than twelve months after its retail sale in Maryland. The data suggest that the new legislation, most probably the licensing require-

ment for handgun purchasers, may have also contributed to a reduction in the number of legal purchasers subsequently involved in a crime with the gun. In further support of the theory that the FSA reduced diversion of handguns into the underground gun market, Maryland saw a 30 percent reduction in in-state handguns recovered in crime less than a year after retail sale. Pennsylvania and Virginia,

**Table 6.** Baltimore Underground Gun Market Survey Respondents’ Perceptions of the Impact of Maryland’s Firearm Safety Act.

Survey Question	N=192	Percent
<b>Have the new laws made it more difficult to get a gun?</b>		
Yes	79	41
No	104	54
Don’t know	6	3
Refuse to answer	3	2
<b>Have the laws affected the cost?</b>		
Yes	77	40
No	102	53
Don’t know	9	5
Refuse to answer	4	2
<b>Have the laws affected the willingness of someone to buy a gun on your behalf?</b>		
Yes	66	34
No	106	55
Don’t know	15	8
Refuse to answer	5	3
<b>Have the laws affected how easy it is to find someone you trust to sell you a gun? (n=191)</b>		
Yes	48	25
No	129	68
Don’t know	11	6
Refuse to answer	3	2

Source: Authors’ calculations based on underground gun market survey.

neighboring states that did not change their laws, did not see a similar decline.

Forty percent of the survey respondents, who were prohibited under Maryland law from legally purchasing or possessing guns, reported that the new law made it more difficult to get guns. More than 30 percent indicated that the law affected the willingness of other individuals to purchase guns on behalf of the respondents. Additionally, 25 percent reported that the law affected the ease of finding a trusted source who would sell guns to the respondents. This is an important factor in the underground gun market. The ability to find a trusted source, or to continue trusting a previously used source, can greatly influence a prohibited individual’s ability to acquire a gun (Cook, Parker, and Pollack 2015). Respondents in our survey, when asked how the law made

it more difficult to find a trusted source, said that they did not know whether they could trust the person or they were wary that the gun might have been stolen. Additionally, when asked how the law affected the willingness of a person to purchase a gun on the respondent’s behalf, several respondents stated that purchasers now must have a permit and that laws are in place against straw purchases. These survey data, in conjunction with the analysis of the crime gun trace data, suggest that Maryland’s FSA is reducing the diversion of guns to persons prohibited from legally acquiring or possessing them.

Although survey results indicate a possible deterrent effect of Maryland’s FSA on access to guns among the prohibited persons interviewed, it is not possible from this study to statistically estimate an impact of the law on over-

all prohibited access to and use of guns. A shift toward a greater share of crime handguns from out of state following enactment of the FSA, however, might signal some degree of scarcity of handguns from local sources in Baltimore's underground market. As an example, federal and local law enforcement announced the arrest of a gun trafficking ring in December 2015 that was allegedly bringing thirty guns per week from Tennessee, where gun sales laws are much weaker than in Maryland, to gangs in Baltimore (Anderson 2015).

Additionally, the share of Baltimore crime handguns from states other than Maryland did increase steadily each year from 55 percent in 2012 (last full year before the FSA) to 64 percent through the first three quarters of 2015. The point estimate from our regression analysis indicated a 20 percent increase in out-of-state crime handguns recovered in Baltimore coincident with the FSA, but the change was not statistically significant. However, the nearly two-thirds of crime handguns in Baltimore traced to original out-of-state retail sales in 2015 further support the existence of notable constraints in the local supply lines to Baltimore's underground gun market (ATF 2016a).

The limited crime gun trace data publicly released by ATF greatly hampers the ability to draw conclusions about the effects of gun sales regulations, especially when juxtaposed against what our research team could do with the granular crime gun data used for this study, as well as in studies by other researchers using gun-level crime gun trace data supplied by local police (Cook et al. 2007; Cook et al. 2014). Discussions of the restrictions Congress has placed on access to ATF's crime gun trace data often focus on limiting law enforcement access and accountability of gun sellers, but these restrictions also hinder research that can inform gun policy decisions and enforcement efforts (Webster et al. 2012).

Although our analyses controlled for the overall number of crime guns being recovered by BPD and general baseline trends in the outcomes, as well as monthly gun registration application approvals before and after passage of the FSA, we did not have monthly handgun sales data to accurately measure and control for exposure risk for the number of handguns

sold in each month. However, one way the FSA provisions may affect the rate of crime involvement of handguns sold in Maryland is in decreasing sales volume.

An important historical confounder we could not control for was the uprising and civil unrest in April 2015 following the death of Freddie Gray, who died of injuries sustained in a BPD van after being arrested. The unrest was followed initially by a decrease in arrests, including a decline in handgun violations, and a historically steep rise in homicides and nonfatal shootings. Weapon arrests subsequently increased and the rate of increase of homicides and shootings slowed (Morgan and Pally 2016). These events likely influenced Baltimore residents' purchases of handguns and the probability that police would arrest someone for illegally carrying or using a handgun during the last five months of the study period, which could influence the relationship between the FSA and recovery of crime guns. Additionally, although this is a longitudinal study, the lack of an appropriate comparison group limits our ability to draw causal inference regarding the effect of the FSA on Baltimore's underground gun market.

In the future, additional years of post-FSA data should be examined to assess whether the ratio of in-state to out-of-state source crime guns continues to trend toward more out-of-state crime guns. When Missouri repealed its handgun purchaser licensing law in 2007, the share of in-state to out-of-state crime guns shifted gradually but steadily over time, such that in-state crime guns rose from 56 percent during 2006 to 74 percent in 2014 (ATF 2016b). This increase coincided with an increase in gun homicide rates and police officers shot in the line of duty, suggesting that laws somewhat similar to the FSA affect criminal access to and use of guns (on rate change, Webster et al. 2014; on officers killed, Crifasi, Pollack, and Webster 2015).

This study offers an evaluation of the impact of the FSA both on indicators of diversion of handguns for criminal purposes and perceptions of the law's impact on the underground market by those prohibited from purchasing or possessing guns. The FSA appears to have constrained the local supply of illegal hand-



guns in Baltimore. Fewer handguns were being recovered with indicators of diversion (short TTC and a different purchaser and possessor), and prohibited purchasers in Baltimore (men on parole or probation) reported increased difficulty in obtaining guns. These findings are consistent with previous literature evaluating the effect of state laws designed to reduce diversion of guns to criminals.

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## **EXHIBIT 12**

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND**

MARYLAND SHALL ISSUE, INC., *et al.*, \*

*Plaintiffs,* \*

v. \* Civil Case No. 16-cv-3311-ELH

LAWRENCE HOGAN, *et al.*, \*

*Defendants.* \*

\* \* \* \* \*

**SECOND SUPPLEMENTAL DECLARATION OF DANIEL W. WEBSTER**

I, Daniel W. Webster, under penalty of perjury, declare and state:

1. I am Bloomberg Professor of American Health in Violence Prevention in the Department of Health Policy and Management at the Johns Hopkins Bloomberg School of Public Health with a joint appointment in the School of Education. I am also Director of the Johns Hopkins Center for Gun Policy and Research and previously served as Co-Director of the Johns Hopkins Center for the Prevention of Youth Violence. I am more than 18 years of age and am competent to testify, upon personal knowledge, to the matters stated below.

2. As part of my prior work on this case, I signed two declarations. My first declaration was signed on August 15, 2018 in support of defendants' motion for summary judgment (ECF 59-19). I also signed a supplemental declaration on November 9, 2018 in further support of defendants' summary judgment motion and in support of defendants' opposition to plaintiffs' cross motion for summary judgment (ECF 89-8).

3. Those prior declarations described, *inter alia*, certain research that I and others have conducted showing that laws that require citizens to obtain a permit to purchase a firearm (“PTP” laws), including Maryland’s requirement for a handgun qualification license (“HQL”), promote public safety and reduce firearms violence.

4. Since the time that I signed my prior declarations in this case, my colleagues and I have completed additional research studies that further support my opinions in this case.

5. I co-authored the first of these new studies using new analytic methods and additional data from my prior study of the impact of Missouri’s repeal of its permit-to-purchase (PTP) law for handguns on homicides.<sup>1</sup> The new study used annual, state-level data on method-specific homicide rates during 1999-2016 and developed estimates of Missouri’s PTP law repeal based on contrasts between changes in Missouri versus other states in the region.<sup>2</sup> When Missouri’s changes in firearm homicide rates were contrasted against the set of states in the region that were most similar to Missouri’s during the period prior to the law’s repeal, we estimated the repeal was associated with a 27 percent increase in firearm homicide rates. The 95 percent confidence interval around that estimate ranged

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<sup>1</sup> Webster DW, Crifasi CK, Vernick JS. Effects of the repeal of Missouri’s handgun purchaser licensing law on homicides. *J Urban Health* 2014;91:293-302. Erratum: *J Urban Health* 2014; 91:598-601.

<sup>2</sup> Hasegawa RB, Webster DW, Small DS. Bracketing in the Comparative Interrupted Time-Series Design to Address Concerns about History Interacting with Group: Evaluating Missouri’s Handgun Purchaser Law. *Epidemiology* 2019 May;30(3):371-379. doi: 10.1097/EDE.0000000000000989. PMID: 30969945.

from a 19 percent increase to a 35 percent increase in firearm homicide rates. This article's scientific rigor was recognized by the journal *Epidemiology*—a top journal for epidemiological research—as runner-up for Rothman Prize for best article in 2019. A copy of this peer-reviewed study is attached to this declaration as Exhibit 1.

6. Another study, published in *Criminology & Public Policy*, showed that handgun purchaser licensing laws and bans of large-capacity magazines are associated with significant reductions in the incidence of fatal mass shootings. Daniel W. Webster, *et al*, *Evidence Concerning the Regulation of Firearms Design, Sale, and Carrying on Fatal Mass Shootings in the United States*, 19 *Criminology & Public Policy* 171–212 (2020). A copy of that article is attached hereto as Exhibit 2. This study used annual, state-level data for 1984-2017 to estimate the association between the adoption and repeal of various state and federal firearm laws on fatal mass shootings after controlling for a variety of demographic, social, economic, and crime variables. In our article published in *Criminology & Public Policy*, we found that PTP laws (also referred to as handgun purchaser licensing laws) were consistently and strongly associated with lower levels of fatal mass shootings after controlling for the presence of other firearm laws and other control variables. In our primary model, we estimate that “handgun purchaser licensing laws requiring either in-person application with law enforcement or fingerprinting (of

applicants) were associated with incidents of fatal mass shootings 56 percent lower than that of other states.”<sup>3</sup> (page 181)

7. The most recent study that I co-authored, published this year in the *American Journal of Public Health*, concluded that State handgun purchaser licensing laws such as the Maryland law at issue in this case—which require a prospective buyer to apply for a license or permit from state or local law enforcement—are highly effective at reducing firearm homicide and suicide rates. Alexander D. McCourt, et al., *Purchaser Licensing, Point-of-Sale Background Check Laws, and Firearm Homicide and Suicide in Four States, 1985–2017*, 110 *Am. J. of Public Health* 10, 1546 (October 2020). A copy of this peer-reviewed study is attached to this declaration as Exhibit 3. Using additional data (1985–2017) from prior studies of changes in handgun purchaser licensing laws in Connecticut and Missouri and new statistical models from prior studies, this study shows that handgun purchaser licensing laws are consistently associated with reductions in firearm homicide and firearm suicide rates. Connecticut’s handgun purchaser licensing law was associated with a 27.8 percent decrease in firearm homicide rates during the post-law period 1996–2017 and a 32.8 percent decrease in firearm suicides. The estimated effect of the law on firearm suicides was a 23.2 percent decrease through 2006, prior to the beginning of a more robust enforcement of a Connecticut law allowing law enforcement to remove firearms when there was eminent danger, most typically in response to threats of suicide. There were

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<sup>3</sup> Webster DW, McCourt AD, Crifasi CK, Booty MD. Evidence Concerning the Regulation of Firearms Design, Sale, and Carrying on Fatal Mass Shootings in the United States. *Criminology & Public Policy*, 2020;19:171–212. doi.org/10.1111/1745-9133.12487

no significant changes in homicide and suicide rates by other methods following Connecticut's 1995 handgun purchaser licensing law. The repeal of Missouri's handgun purchaser licensing law was associated with a 47.3 percent increase in firearm homicide rates and a 23.5 percent increase in firearm suicides. Suicide rates for methods other than firearms did not change in response to the repeal of Missouri's handgun purchase licensing law. There was evidence that nonfirearm homicides increased in Missouri following the law's change; however, the magnitude of the percentage change (+18 percent%) was substantially lower than that of firearm homicide rates. This same study estimated the effects of laws in Maryland (1996) and Pennsylvania (1995) requiring extending background check requirements to private transfers of handguns and found no evidence that background checks without licensing requirements reduced homicide or suicide rates. By contrasting estimates of policy impact of comprehensive background checks for handguns with and without purchaser licensing, this study provided additional compelling evidence that laws requiring handgun purchasers to be licensed have large public safety benefits in preventing homicides and suicides.

8. These studies contribute to a body of research showing that handgun purchaser licensing laws such as Maryland's HQL law are associated with reductions in firearm-related violence and deaths, and provide further support for my opinion that Maryland's HQL licensing requirement promotes public safety and reduces firearms violence.

I hereby declare under penalty of perjury that the foregoing is true and correct.

Date: October 23, 2020

  
\_\_\_\_\_  
Daniel W. Webster

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## **Declaration Exhibit 1**



# Evaluating Missouri's Handgun Purchaser Law

## *A Bracketing Method for Addressing Concerns About History Interacting with Group*

Raiden B. Hasegawa,<sup>a</sup> Daniel W. Webster,<sup>b</sup> and Dylan S. Small<sup>a</sup>

**Abstract:** In the comparative interrupted time series design (also called the method of difference-in-differences), the change in outcome in a group exposed to treatment in the periods before and after the exposure is compared with the change in outcome in a control group not exposed to treatment in either period. The standard difference-in-difference estimator for a comparative interrupted time series design will be biased for estimating the causal effect of the treatment if there is an interaction between history in the after period and the groups; for example, there is a historical event besides the start of the treatment in the after period that benefits the treated group more than the control group. We present a bracketing method for bounding the effect of an interaction between history and the groups that arises from a time-invariant unmeasured confounder having a different effect in the after period than the before period. The method is applied to a study of the effect of the repeal of Missouri's permit-to-purchase handgun law on its firearm homicide rate. We estimate that the effect of the permit-to-purchase repeal on Missouri's firearm homicide rate is bracketed between 0.9 and 1.3 homicides per 100,000 people, corresponding to a percentage increase of 17% to 27% (95% confidence interval: 0.6, 1.7 or 11%, 35%). A placebo study provides additional support for the hypothesis that the repeal has a causal effect of increasing the rate of state-wide firearm homicides.

**Keywords:** Bracketing; Causal inference; Comparative interrupted time series; Difference-in-difference; Firearm policy; Gun violence; History-by-group interaction; Permit-to-purchase

(*Epidemiology* 2019;30: 371–379)

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The authors report no conflicts of interest.

**SDC** Supplemental digital content is available through direct URL citations in the HTML and PDF versions of this article ([www.epidem.com](http://www.epidem.com)).

Data and code availability: The data is provided in Table 1. The code that produced the results can be found in the electronic supplementary materials.

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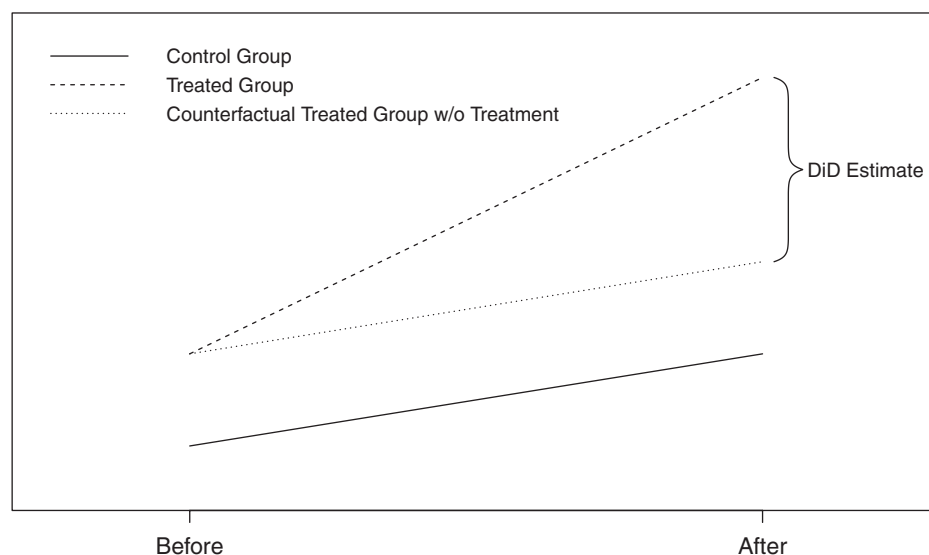
ISSN: 1044-3983/19/3003-0371

DOI: 10.1097/EDE.0000000000000989

### COMPARATIVE INTERRUPTED TIME SERIES DESIGN AND POTENTIAL BIASES

The interrupted time series design is an observational study design for estimating the causal effect of a treatment on a group when data are available before the group was treated. In the simplest interrupted time series design, the before and after treatment outcomes are compared. This before-after design does not account for confounding factors that co-occur with treatment such as historical events or maturation.<sup>1</sup> To strengthen the before-after design, it is common to add time series data from a control group that never received the treatment over the same period—the comparative interrupted time series design,<sup>1–4</sup> also called the nonequivalent control group design or method of difference-in-differences. The latter name derives from the concept that the simplest comparative interrupted time series analysis is to take the difference between the difference of the after and before outcomes for the treated group and the difference of the after and before outcomes for the control group. This difference-in-differences estimate is an unbiased estimator of the causal effect of treatment if the treatment and control groups would have exhibited parallel trends in the counterfactual absence of treatment<sup>2</sup> (see Figure 1).

The parallel trends assumption can be partially assessed if there is more than one time point in the before period by assessing whether the groups exhibit parallel trends in the before period.<sup>2</sup> However, even if the trends are parallel in the before period, there could be historical events in the after period that affect the two groups differently, i.e., history interacts with group (other reasons that parallel trends could be violated include differences in maturation, instrumentation, or statistical regression between the groups).<sup>5,6</sup> For example, the outcome measures poor health, country A (treated group) enacts a policy reform, country B (control group) does not enact the reform, and a worldwide economic recession occurs after the reform that has a greater impact on people starting out in poorer health. If country B started out with poorer health, then parallel trends would be violated because country B's poor health would have increased more than country A in the after period in the counterfactual absence of the reform because of the worldwide economic recession. This violation of parallel trends would not happen if A and B started with the



**FIGURE 1.** Stylized plot of data from a comparative interrupted time series design. The dotted line shows the assumption that the difference-in-difference (DiD) estimate makes about the treatment group's counterfactual mean in the absence of treatment.

same level of poor health in the before period. However, it is often difficult to find a control group that has outcomes close to the treated group in the before period.

When there is no control group completely comparable to the treated group, Campbell<sup>7</sup> proposed bracketing to distinguish treatment effects from plausible biases.<sup>8</sup> Consider the study design of comparing treatment and control at one time point and suppose that there is concern about an unmeasured confounder  $U$ . Bracketing uses two control groups such that, in the first group,  $U$  tends to be higher than in the treated group, and in the second group,  $U$  tends to be lower. The effect of  $U$  on the treated group is bracketed by its effect on the two control groups. When there is bracketing, if the treated group has a notably higher outcome than both control groups, then this association between treatment and outcome cannot plausibly be explained away as being bias from  $U$ .

In this article, we show how bracketing can be applied to the comparative interrupted time series to distinguish treatment effects from plausible biases due to history interacting with group. The basic idea is to consider one control group that has a lower expected outcome than the treated group in the before period and another control group that has a higher expected outcome than the treated group in the before period; we show under certain assumptions that the expectations of the two difference-in-difference estimators using the lower control group and higher control group, respectively, bracket the causal effect of the treatment. Bracketing for the comparative interrupted time series has been mentioned informally,<sup>2</sup> but the idea of choosing the bracketing control groups based on expected before period outcomes was not mentioned. We present assumptions and results for our bracketing method (Methods: Bracketing section) and then apply the method to study the effect of the repeal of Missouri's permit-to-purchase handgun law on its firearm homicide rate (Application: Effect of the Repeal of Missouri's Handgun Purchaser Licensing Law on Firearm Homicides).

## METHODS: BRACKETING

### Notation and Model

Let  $y$  denote outcome and  $D$  dose of exposure,  $D=1$  for treatment and  $D=0$  for control. Let  $Y_{ip}^{(d)}$  denote the counterfactual outcome that would have been observed for unit  $i$  in period  $p$ ,  $p=0$  for before period and  $p=1$  for after period, and had the unit received exposure dose  $d$ , i.e.,  $Y_{ip}^{(1)}$  is the counterfactual outcome under treatment and  $Y_{ip}^{(0)}$  is the counterfactual outcome under control. Let  $\mathbf{U}_i$  be a vector of time-invariant unmeasured confounders for unit  $i$ . Let  $G$  denote group where the groups are  $t$  = treated group,  $lc$  = lower control group (control group with expected outcomes lower than treated group in before period), and  $uc$  = upper control group (control group with expected outcomes higher than treated group in before period). Finally, let  $S$  be an indicator of whether or not a unit belonging to a particular group is in the study population in a given period. Specifically,  $S_{ip} = 1$  or  $0$  when unit  $i$  is in the population or not in period  $p$ :  $S_{i0}=S_{i1}=1$  for a unit in the population both before and after treatment,  $S_{i0}=1, S_{i1}=0$  for a unit in the population only before treatment (unit might have moved away or died in after period), and  $S_{i0}=0, S_{i1}=1$  for a unit in the population only after treatment (unit might have moved into study area or been born in after period).

We consider the following model that generalizes the standard difference-in-difference model and changes-in-changes model.<sup>9</sup> Let  $\mathbf{U}_i$  be time-invariant unmeasured confounders and  $\epsilon_{ip}$  be an error term that captures additional sources of variation for unit  $i$  in period  $p$ . Then our model can be expressed as follows:

$$Y_{ip}^{(d)} = h(\mathbf{U}_i, p) + \beta d + \epsilon_{ip}, \quad (1)$$

where the function  $h(\mathbf{U}_i, p)$  is the unobserved expected outcome under control of subject  $i$  in period  $p$ . We drop the subscript  $i$  to refer to a randomly drawn unit from the population

of all units in either period, where  $Y_p^{(d)}$ ,  $d=0,1$ , and  $\mu_p$  are undefined if  $S_p = 0$ . We make the following assumptions:

Increasingness of  $h$  in  $\mathbf{U}$ :  $h(\mathbf{U}, p)$  bounded and increasing in  $\mathbf{U}$  for  $p=0,1$ . (2)

$((h(\mathbf{U}, p) \geq h(\mathbf{U}', p))$  whenever all coordinates of  $\mathbf{U} \geq$  all coordinates of  $\mathbf{U}'$ )

Time Invariance of  $\mathbf{U}$  Within Groups:  $\mathbf{U}$  conditionally independent of  $\{S_0, S_1\}$  given group  $G$ . (3)

Independence of  $\epsilon$  with Time and Group: Distributions of  $\epsilon_p \mid S_p=1, G=g$  for  $p=0,1$ ,  $g=lc, uc, tc$  all have mean zero and are the same. (4)

Assumptions (2) and (3) match assumptions in the changes-in-changes model. Assumption (2) requires that higher levels of unmeasured confounders correspond to higher levels of outcomes. Such increasingness is natural when the unmeasured confounder is an individual characteristic such as health or ability<sup>9</sup> and  $Y$  is a measure of some positive outcome, for example, income. Negative confounders—where higher levels of the confounder correspond to lower levels of the outcome—are not precluded by Assumption (2) as the corresponding coordinates of  $\mathbf{U}$  may simply be replaced by their negation. Assumption (3) says that the distribution of confounders in the population of units for a given group remains the same over time. Assumption (4) says that time-varying factors have the same distribution in each group and over time. It would be sufficient for subsequent developments to just assume the distributions of  $\epsilon_p \mid S_p=1, G=g$  for  $p=0,1$ ,  $g=lc, uc, tc$  all have mean zero rather than the stronger assumption of identical distributions (4). We can further relax this assumption by assuming zero mean only for components of  $\epsilon_p$  that are true confounders, that is, factors whose distributions depend on the interaction of time and group. Assumption (4) is weaker than the changes-in-changes model assumption that  $\epsilon_p$  is always zero which rules out classical measurement error in the outcome when  $h$  is nonlinear.<sup>9</sup> Our model contains the standard difference-in-difference model, which can be represented in our model by  $h(\mathbf{U}, p) = k(\mathbf{U}) + \tau p$  for some bounded and increasing function  $k$ , where  $k(\mathbf{U})$  can be viewed as a group fixed effect.

We make two further assumptions about the distribution of  $\mathbf{U}$  in groups and how its effect over time changes among the groups. First, we assume the distribution of  $\mathbf{U}$  within groups can be stochastically ordered so that  $\mathbf{U}$  is lowest in the lower control group, intermediate in the treated group, and highest in the upper control group:

$$\mathbf{U} \mid G=lc \leq \mathbf{U} \mid G=t \leq \mathbf{U} \mid G=uc, \quad (5)$$

where two random vectors  $A, B$  are stochastically ordered,  $A \leq B$ , if  $E[f(A)] \leq E[f(B)]$  for all bounded increasing functions  $f$ .<sup>10</sup>

For example, if  $\mathbf{U}$  is normally distributed with common variance and group means  $\mu_{lc}, \mu_t$ , and  $\mu_{uc}$ , then  $\mu_{lc} \leq \mu_t \leq \mu_{uc}$  would imply (5). Second, we assume that higher values of  $\mathbf{U}$  either have a bigger effect over time over the whole range of  $\mathbf{U}$  or a smaller effect over the whole range:

Either (i)  $h(\mathbf{U}, 1) - h(\mathbf{U}, 0) \geq h(\mathbf{U}', 1) - h(\mathbf{U}', 0)$  for all

$$\mathbf{U} \geq \mathbf{U}', \mathbf{U}, \mathbf{U}' \in \mathcal{U} \text{ or}$$

$$(ii) h(\mathbf{U}, 1) - h(\mathbf{U}, 0) \leq h(\mathbf{U}', 1) - h(\mathbf{U}', 0) \text{ for all } \mathbf{U} \geq \mathbf{U}', \mathbf{U}, \mathbf{U}' \in \mathcal{U} \quad (6)$$

An example of this pattern of  $\mathbf{U}$  confounding could occur in a study of the effect of a regional policy on average income where the policy change occurred contemporaneously with an easing of trade restrictions. A potential unmeasured confounder for such a study would be  $\mathbf{U}$  = share of skilled workers in a region, as a higher share of skilled workers is associated with higher average income. There is considerable evidence that trade liberalization leads to an increase in the skill premium—the relative wage of skilled to unskilled workers—at both the regional and country levels.<sup>11,12</sup> Thus, we might expect (i) in (6) to hold if there was an easing of trade restrictions in the after period.

We assume units are randomly sampled from each group in each time period. The data could be obtained from repeated cross-sections or a longitudinal study. Inferences under different sampling assumptions are discussed in eAppendix 1; <http://links.lww.com/EDE/B503>.

## Bracketing Result

The standard moment difference-in-difference estimator using control condition  $c$  can be written as  $\hat{\beta}_{dd,c} = (\bar{Y}_{1|G=t} - \bar{Y}_{0|G=t}) - (\bar{Y}_{1|G=c} - \bar{Y}_{0|G=c})$ , where  $\bar{Y}_{p|G=g}$  indicates the sample average of units observed in group  $g$  and time period  $p$ ,  $Y_p \mid G=g, S_p=1$ . This estimate is equivalent to the coefficient on the treatment indicator in a fixed-effects regression with full time and group indicator variables. When using data already aggregated at some level, for example, by state-year, a fixed-effects regression using weights proportional to population will return this estimate. In the following, we show that the expectation of the two standard difference-in-difference estimators computed with the upper and lower controls can be used to bound the treatment effect.

The expected value of the standard difference-in-difference estimator comparing the treated group to the lower control group,  $\hat{\beta}_{dd,lc}$ , is

$$\begin{aligned} E[\hat{\beta}_{dd,lc}] &= \{E[Y_1 \mid G=t, S_1=1] - E[Y_0 \mid G=t, S_0=1]\} \\ &\quad - \{E[Y_1 \mid G=lc, S_1=1] - E[Y_0 \mid G=lc, S_0=1]\} \\ &= \{\beta + E[h(\mathbf{U}, 1) \mid G=t, S_1=1] - E[h(\mathbf{U}, 0) \mid G=t, S_0=1]\} \\ &\quad - \{E[h(\mathbf{U}, 1) \mid G=lc, S_1=1] - E[h(\mathbf{U}, 0) \mid G=lc, S_0=1]\}, \end{aligned}$$

where  $Y_1, Y_0$  denote observed outcomes in after period ( $p=1$ ) and before period ( $p=0$ ), respectively. Under the time invariance of  $\mathbf{U}$  within groups assumption (3), we have

$$E[\hat{\beta}_{dd,lc}] = \beta + \{E[h(\mathbf{U},1) - h(\mathbf{U},0) | G=t]\} - \{E[h(\mathbf{U},1) - h(\mathbf{U},0) | G=lc]\}; \quad (7)$$

similarly, the expected value of the difference-in-difference estimator comparing the treated group to the upper control group,  $\hat{\beta}_{dd,uc}$ , is

$$E[\hat{\beta}_{dd,uc}] = \beta + \{E[h(\mathbf{U},1) - h(\mathbf{U},0) | G=t]\} - \{E[h(\mathbf{U},1) - h(\mathbf{U},0) | G=uc]\}. \quad (8)$$

The difference-in-difference estimators  $\hat{\beta}_{dd,lc}$  and  $\hat{\beta}_{dd,uc}$  are unbiased if  $h(\mathbf{U},1) - h(\mathbf{U},0)$  is constant for all  $\mathbf{U}$ , or equivalently the effect of the unmeasured confounders is the same in both time periods. If the effect of the unmeasured confounders changes between periods, then because of assumptions (5) and (6), we conclude from (7) and (8) that

$$\min\{E[\hat{\beta}_{dd,lc}], E[\hat{\beta}_{dd,uc}]\} \leq \beta \leq \max\{E[\hat{\beta}_{dd,lc}], E[\hat{\beta}_{dd,uc}]\}, \quad (9)$$

i.e., the expected values of the difference-in-difference estimators using the upper control group and lower control group bracket the causal effect (proof in eAppendix2; <http://links.lww.com/EDE/B503>). The tightness of the bracketing bounds in (9) and, to some extent, the width of the corresponding confidence interval developed in the following section depend on the magnitude of the group-by-time interaction. For example, if urban poverty concentration varied notably between groups and its effect on firearm homicides were modulated by the Great Recession, one would expect looser bracketing bounds.

## Inference

We would like to make inferences for the causal effect  $\beta$  under the assumption (6) that  $h(\mathbf{U},1) - h(\mathbf{U},0)$  is either an increasing or a decreasing function of  $\mathbf{U}$  (we do not want to specify which a priori). Let  $\theta_{lc,t} = E[\hat{\beta}_{dd,lc}]$  and  $\theta_{uc,t} = E[\hat{\beta}_{dd,uc}]$ , i.e., the expected values of the difference-in-difference estimators using the lower control group and upper control group, respectively. From the bracketing results (9), we have

$$\min(\theta_{lc,t}, \theta_{uc,t}) \leq \beta \leq \max(\theta_{lc,t}, \theta_{uc,t}).$$

and the following interval, where CI means confidence interval,

$$\begin{aligned} & [\min(\text{lower endpoint of } 1-\alpha \text{ two-sided CI for } \theta_{lc,t}, \\ & \text{lower endpoint of } 1-\alpha \text{ two-sided CI for } \theta_{uc,t}) \\ & \max(\text{upper endpoint of } 1-\alpha \text{ two-sided CI for } \theta_{lc,t}, \\ & \text{upper endpoint of } 1-\alpha \text{ two-sided CI for } \theta_{uc,t})], \end{aligned} \quad (10)$$

has probability  $\geq 1-\alpha$  of containing both  $\min(\theta_{lc,t}, \theta_{uc,t})$  and  $\max(\theta_{lc,t}, \theta_{uc,t})$ , and thus  $\beta$ , where it assumed that the two-sided CIs are constructed by taking the intersection of two one-sided  $1-(\alpha/2)$  confidence intervals (proof in eAppendix3; <http://links.lww.com/EDE/B503>).

## Constructing the Lower and Upper Control Groups

The results in the previous two sections assume that the lower and upper control groups have been constructed before looking at the data. If the lower control group was constructed by looking at the before period data by choosing units with lower outcomes than the treated in the before period, then the sample average of  $Y_0 | G=lc, S_0=1$  may tend to be lower than  $E(Y_0 | G=lc, S_0=1)$ . Consequently, the difference-in-difference estimate using the lower control group may be downward biased even if the parallel trends assumption holds because of regression to the mean<sup>1</sup>; similarly, the difference-in-difference estimated using the upper control group may be upward biased. This may invalidate the bracketing result (9). To avoid bias resulting from regression to the mean, we propose first selecting a “prestudy” time period prior to the before period. Then, the lower control group can be constructed from units with lower outcomes than the treated in this prestudy period and the upper control group from units with higher outcomes. It should then be tested whether the constructed lower control group has smaller expected outcomes than the constructed upper control group in the before period; see sec:application, for example.

## Role of Examining the Groups’ Relative Trends in the Before Period

In the standard difference-in-difference analysis that assumes parallel trends, when the before period contains multiple time points, it is a good practice to test for parallel trends in the before period.<sup>2,13</sup> In our bracketing approach, we do not need the parallel trend assumption to hold, but examining the relative trends of the groups in the before period is still useful for assessing model plausibility and assumptions. Our model (1)–(4) along with assumptions (5) and (6) implies that if we had counterfactual data on the treatment group in the after period in the absence of treatment, then, without sampling variance, we would see either (1) the differences between the upper control and counterfactual treated groups and the difference between the counterfactual treated and lower control groups in the after period would be at least as large as their respective differences in the before period or (2) the difference between the upper control and counterfactual treated groups and the difference between the counterfactual treated and lower control groups in the after period would be no larger and possibly smaller than their respective differences in the before period. The following two patterns would violate the model/assumptions: (3) the difference between the upper control and counterfactual treated groups is larger after than before and the difference between the counterfactual treated and lower



control groups is smaller after than before or (4) the difference between the upper control and counterfactual treated groups is smaller after than before and the difference between the counterfactual treated and lower control groups is larger after than before. Although we do not have the counterfactual treatment group’s data in the absence of treatment in the after period, we have the treatment group’s data in the absence of treatment in the before period. We can split the before period into two (or more) periods and test whether the pattern in the before period is consistent with the model. Visual inspection of the relative trends of the counterfactual treated group and the upper and lower control groups during the before period can provide additional evidence for or against the model assumptions.

Time-Varying Confounders

Our bracketing method addresses an interaction between history and groups that arises because the time-invariant unmeasured confounders that differ between the groups in the before period (**U**) become more (or less) important in the after period (assumption (6)). When there are time-varying confounders, the bracketing method still works under certain assumptions. Time-varying confounders can be represented in model (1) by letting **U** contain all variables that differ in distribution between the groups in the before period,  $\mu_0$  be the effect of factors that do not differ in distribution between the groups in the before period and  $\mu_1$  be the effect of the same factors in  $\mu_0$  in the after period as well as factors not contained in **U** that differ in distribution between the groups in the after period (details on time-varying model in eAppendix4; <http://links.lww.com/EDE/B503>). If this last set of factors is present, then (4) may not hold. However, the bracketing result (9) still holds as long as (i) in (6) holds,

$$E[\epsilon_{it} | G=uc] \geq E[\epsilon_{it} | G=t] \geq E[\epsilon_{it} | G=lc], \tag{11}$$

or when (ii) in (6) holds,

$$E[\epsilon_{it} | G=uc] \leq E[\epsilon_{it} | G=t] \leq E[\epsilon_{it} | G=lc]; \tag{12}$$

eAppendix4; <http://links.lww.com/EDE/B503> contains a proof and sufficient conditions for (11) or (12) to hold. One of these sufficient conditions (condition (c) in eAppendix4; <http://links.lww.com/EDE/B503>) is analogous to (i) in (6) in that effects on the outcome, be they time effects or those due to contemporaneous shocks to confounders, are amplified at larger values of **U**.

One type of time-varying confounder is a variable that largely stays the same between time periods but may change modestly. For example, in our study of Missouri’s repeal of their permit-to-purchase law in sec:application, urban concentration of poverty might be a confounder and **U** contain urban concentration of poverty in the before period. Urban concentration of poverty may stay mostly the same over time but change modestly, where the changes are reflected in  $\epsilon_i$ . If the effect of urban concentration of poverty on firearm homicides

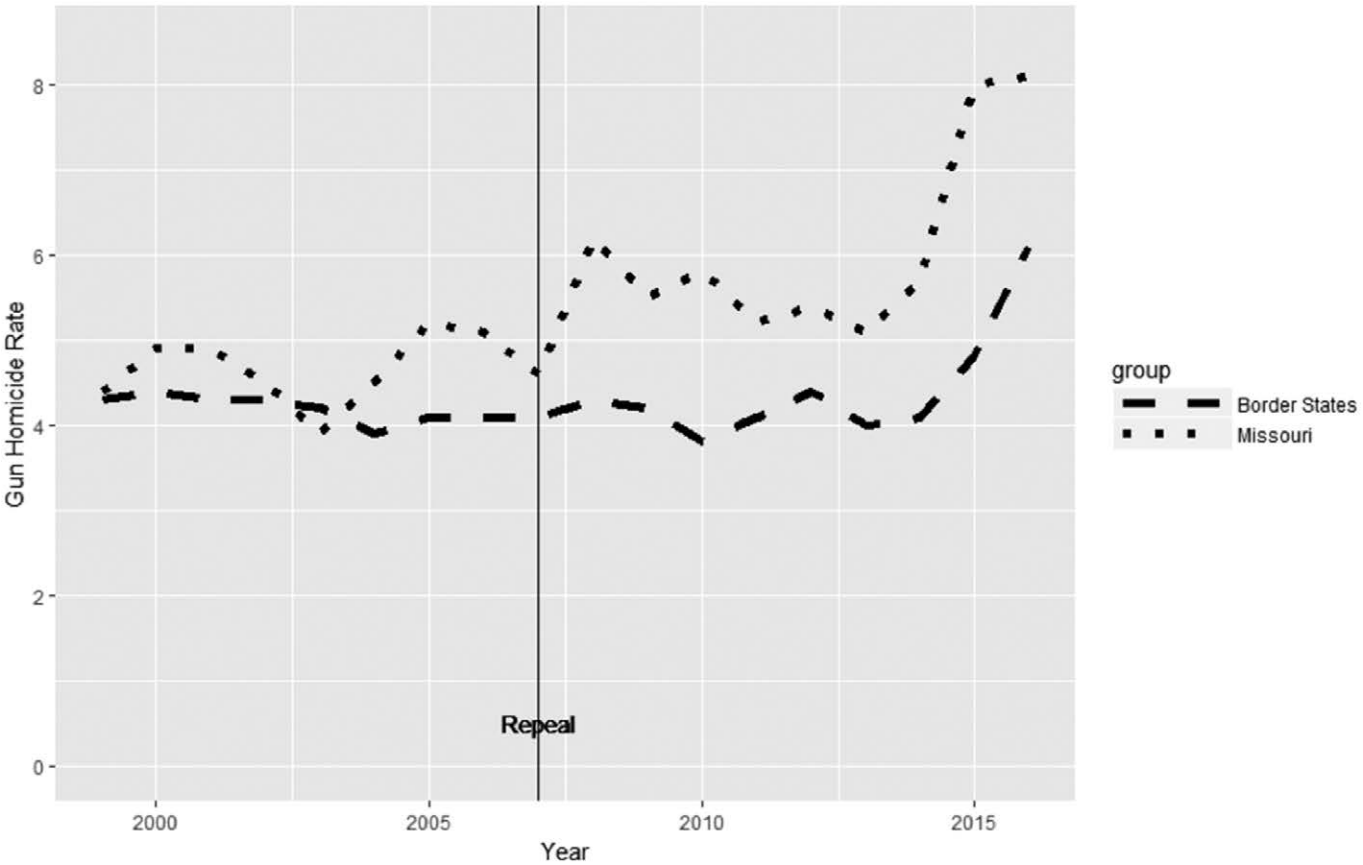
increased in the after period, then the bracketing result would still hold (with respect to the confounding from urban concentration of poverty) as long as the impact of changes in urban concentration of poverty on firearm homicides were at least as great in the upper control group as Missouri and at least as great in Missouri as the lower control group.

Application: Effect of the Repeal of Missouri’s Handgun Purchaser Licensing Law on Firearm Homicides

American federal gun law requires background checks and record keeping for gun sales by federally licensed firearm dealers but exempts these regulations for private sales. However, some states have laws requiring all purchasers of handguns from licensed dealers and private sellers to acquire a permit-to-purchase license that verifies the purchaser has passed a background check. Missouri passed a permit-to-purchase law in 1921, requiring handgun purchasers to obtain a license from the local sheriff’s office that facilitated the background check, but repealed the law on 28 August 2007 Webster et al.<sup>14</sup> examined the effect of Missouri’s repeal on firearm homicide rates (the rate of homicides committed using a firearm). One of their analyses used a comparative interrupted time series design, comparing Missouri to the eight states bordering Missouri using a before period of 1999–2007 and after period of 2008–2010 (the only available postrepeal data at the time of their analysis), finding evidence that the repeal of Missouri’s permit-to-purchase law increased firearm homicide rates (see their Table 1). None of the border states introduced new or made changes to the existing permit-to-purchase laws during the study period. Using a fixed-effect

TABLE 1. Age-adjusted Firearm Homicide Rates per 100,000 Persons from Periods 1994–1998 (prestudy Period Used to Construct Lower and Upper Control Groups), 1999–2007 (Before Repeal Period Where Repeal Refers to Repeal of Missouri’s Permit-To-Purchase Handgun Licensing Law) and 2008–2016 (After Repeal Period)

	1994–1998	1999–2007	2008–2016
Missouri	6.1	4.7	6.1
Arkansas	7.3	5.1	5.5
Illinois	7.1	5.1	5.2
Iowa	1.2	0.9	1.2
Kansas	4.2	3.0	3.0
Kentucky	4.1	3.3	3.7
Nebraska	2.2	1.8	2.4
Oklahoma	4.8	3.8	4.8
Tennessee	6.9	5.5	5.4
Population-weighted all controls	5.6	4.2	4.4
Population-weighted upper controls	7.1	5.2	5.3
Population-weighted lower controls	3.5	2.7	3.2



**FIGURE 2.** Age-adjusted firearm homicide rates in Missouri and states bordering Missouri (population-weighted averages), 1999–2016.

regression and adjusting for several background crime and economic covariates, they estimated that the Missouri permit-to-purchase repeal was associated with an increase in the firearm homicide rate by 1.1 per 100,000 persons (95% confidence interval [CI]: 0.8, 1.4), a 22% (95% CI: 16 %, 29%) increase. Nongun-related homicides remained virtually unchanged. In what follows, we reexamine the effect of Missouri’s repeal using bracketing and the now available after period data from 2008 to 2016 to address possible biases arising from unobserved state-by-time interactions. The code and data can be seen in <http://links.lww.com/EDE/B501>.

Figure 2 shows the age-adjusted firearm homicide rates in Missouri and the border states over the study period using data from the US Centers for Disease Control and Prevention’s (CDC) Wide-ranging Online Data for Epidemiologic Research (WONDER) system.<sup>15</sup> The standard difference-in-difference estimate using all neighboring control states, shown in the top row of Table 2, is that Missouri’s permit-to-purchase repeal increased firearm homicides by 1.2 per 100,000 persons (95% CI: 1.0,1.4), corresponding to a 24% increase (95% CI: 18%, 31%). In the before period, Missouri had generally higher firearm homicide rates than the control border states, suggesting a lack of comparability between the groups.

**TABLE 2.** Difference-in-Difference Estimates of Effect of Repeal of Missouri’s Permit-To-Purchase Handgun Licensing Requirement on Firearm Homicide Rates per 100,000 Persons

Control Group	Estimate [95% CI]	Corresponding % Change Estimate [95% CI]
All controls	1.2 [0.9, 1.5]	24% [18%, 31%]
Upper controls	1.3 [0.9, 1.7]	27% [19%, 35%]
Lower controls	0.9 [0.6, 1.2]	17% [11%, 23%]

One concern is that the start of the after period coincided with the beginning of the Great Recession. The economic downturn was followed by a decline in homicide rates. Possible reasons for the effect of the downturn on homicide rates and violence generally include changing alcohol affordability, disposable income, unemployment, and income inequality.<sup>16–18</sup> The effects of the economic downturn on firearm homicides might interact with the starting level of firearm homicides in a state. To address this concern, we constructed upper and lower control groups that bracket Missouri’s firearm homicide rate in the before period. To avoid regression to the mean (Constructing the Lower and Upper Control Groups), we use data from 1994 to 1998, 5 years before our before period, to choose

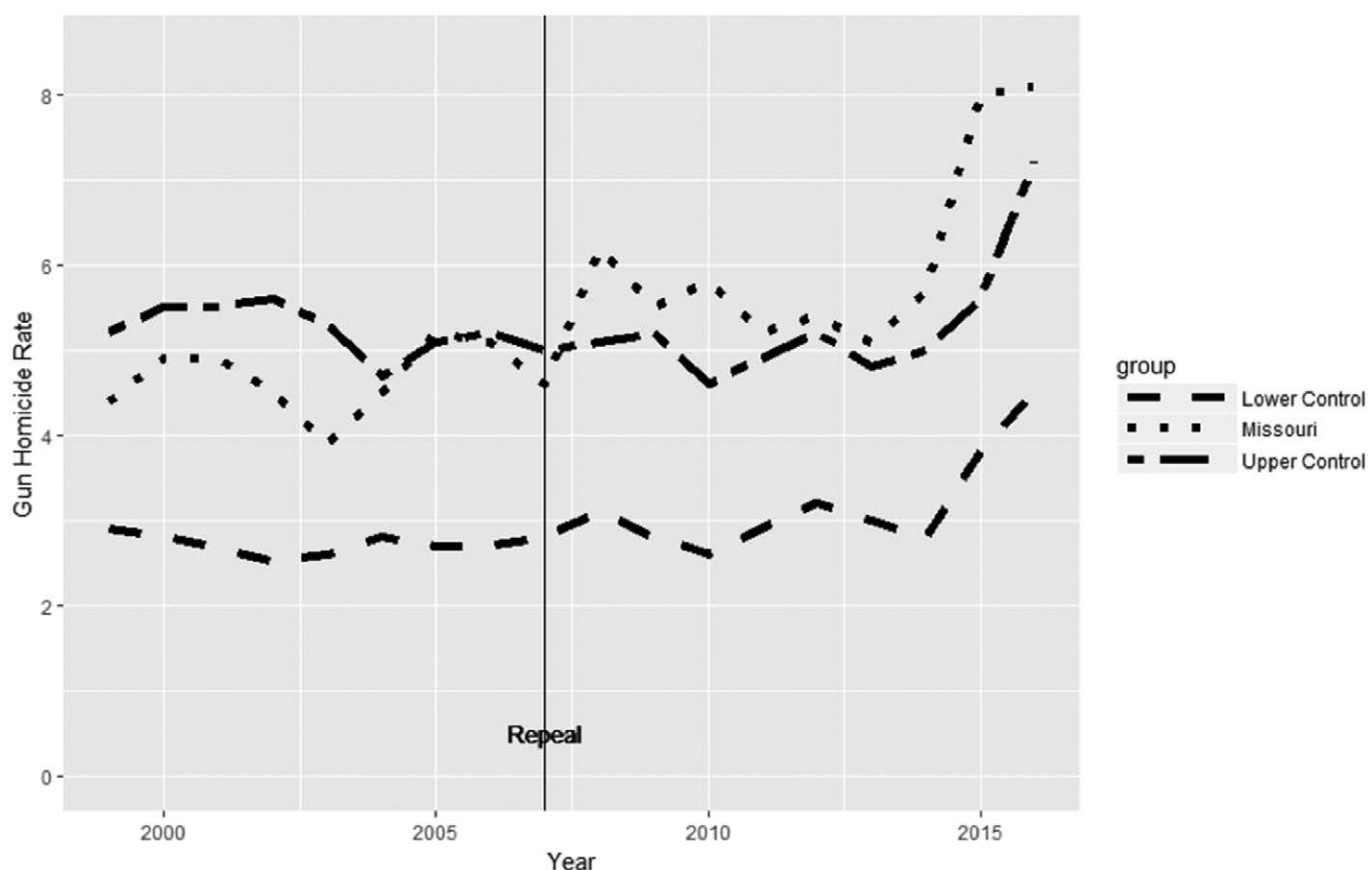
the upper and lower control groups; see Table 1 for data. The lower control group is Iowa, Kansas, Kentucky, Nebraska, and Oklahoma, and the upper control group is Arkansas, Illinois, and Tennessee. The population-weighted firearm homicide rate in the before period of 1999–2007 is 5.2 in the upper control states, 4.7 in Missouri, and 2.7 in the lower control states (95% CI for difference between upper control and Missouri: 0.2, 0.8; 95% CI for difference between Missouri and lower controls: 1.8, 2.2).

Figure 3 shows firearm homicides rates (age adjusted and population weighted) in the bracketed control groups compared with Missouri. The bottom two rows of Table 2 show the difference-in-difference estimates using the lower and upper control groups and 95% CIs. Both the lower and upper control groups provide evidence that Missouri's repeal of its permit-to-purchase handgun law increased firearm homicides, bracketing the effect of the repeal between 0.9 and 1.3 homicides per 100,000 people, corresponding to a percentage increase of 17% to 27%. The interval (10) that has a  $\geq 95\%$  chance of containing the effect of the repeal on the firearm homicide rate is [0.6, 1.7], corresponding to an 11% to 35% increase in firearm homicides, providing evidence that the repeal increased firearm homicides.

### Assessing Model Assumptions: Time-Varying Confounders and Relative Trends

A type of time-varying confounder that is relevant to the Missouri permit-to-purchase study is a factor that only arises in the after period. The Ferguson unrest in 2014 might have led to less effective policing (spikes in violence typically follow social unrest) in Missouri compared with other states. Such a time-varying confounder would be unlikely to satisfy (11) or (12) because it arises only in the treated group (Missouri) in the after period. However, this confounder alone does not change our finding that the repeal increased firearm homicides. If we limit the study to 2008–2013, Missouri still has larger increases in firearm homicide rates than both the upper and lower control groups; see eAppendix6; <http://links.lww.com/EDE/B503>.

To assess the plausibility of our models (1)–(4) and assumptions (5) and (6), we apply the relative trends test described in Role of Examining the Groups' Relative Trends in the Before Period. Applying the test to our study of the repeal of Missouri's permit-to-purchase law, we do not find evidence that our model assumptions are violated. Visual inspection of the relative trends of counterfactual Missouri and the upper and lower controls in the before period further supports the plausibility of our model assumptions; see eFigure1 in eAppendix5; <http://links.lww.com/EDE/B503>.



**FIGURE 3.** Age-adjusted gun homicide rates per 100,000 persons in Missouri, lower control states bordering Missouri (population-weighted averages) and upper control states bordering Missouri, 1999–2016.

## STANDARD ERROR ESTIMATES: A POISSON MODEL FOR DEATH COUNTS

The standard errors used for inference in the previous section come directly from the CDC WONDER system. Vital statistics that derive from complete counts of deaths (by cause) are not subject to sampling error. Nonetheless, a stochastic model of vital statistics may be justified by the presence of biological, environmental, sociological, and other natural sources of variability.<sup>19</sup> For inferential purposes, a census may be viewed as a realization from such a stochastic process under similar conditions to those observed.<sup>20</sup> In particular, the observed firearm homicide death rate in any state-year may be viewed as one of a large series of possible Poisson distributed outcomes under similar conditions.<sup>21</sup> The standard errors reported by the CDC are computed under this Poisson model.

## A Placebo Study: Assessing Alternative Sources of Uncertainty

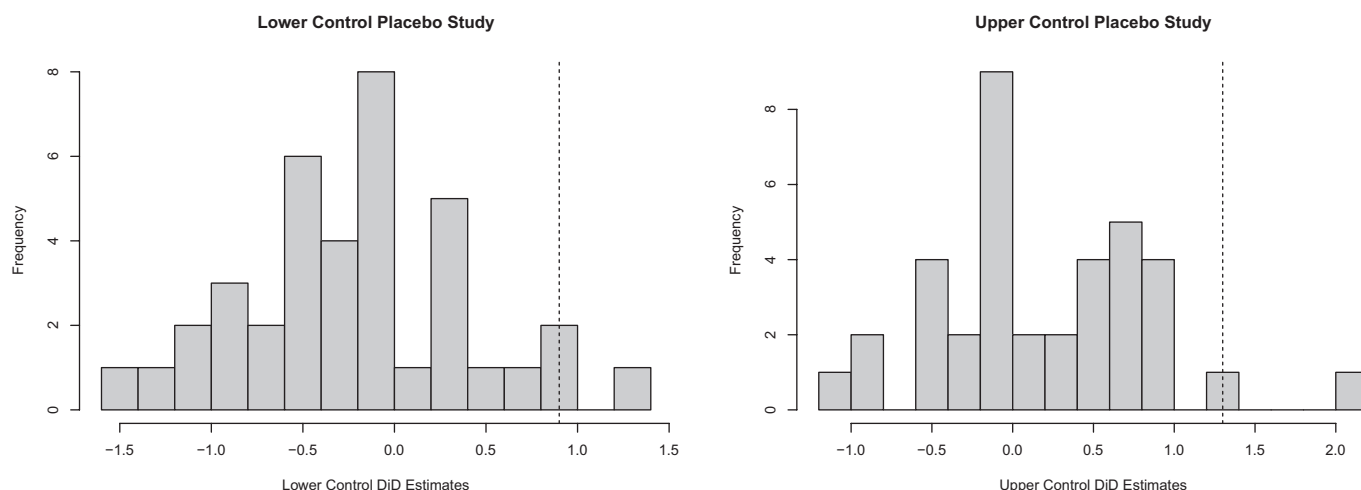
There may be other sources of uncertainty unaccounted for by the natural variability of a Poisson model for yearly state-level firearm homicides. Several recent papers suggest that such sources of uncertainty, if ignored, may yield substantially different inferential conclusions. Serially correlated data,<sup>22</sup> yearly state-level shocks,<sup>23</sup> and small numbers of policy changes<sup>24</sup> can cause the standard errors returned by a fixed-effects regression to be downwardly biased. We conduct a placebo study<sup>22,25</sup> to address inferential challenges that arise from the presence of possibly dependent, yearly state-level shocks to the conditions that generate these Poisson realizations.

Akin to permutation inference, a placebo study in the context of the Missouri permit-to-purchase repeal analysis applies the bracketing method to every state to create a placebo intervention effect distribution. Specifically, for each

state where there was no permit-to-purchase repeal, we construct lower and upper control groups of neighboring states, when available, in exactly the same way we did so for Missouri. We then compute the difference-in-difference estimates using both control groups for a placebo “repeal” on 28 August 2007. This results in two exact distributions for the placebo intervention effect estimate, one estimated using lower controls and the other using upper controls. If the permit-to-purchase repeal effect in Missouri is not spurious, we would expect to see few placebo effects greater than the ones reported in our study using either control condition. The histograms of the placebo effects in Figure 4 suggest that the Missouri bracketing study is relatively robust to these alternative sources of variability. Of the 38 states that had lower control neighbors, only two (Oklahoma and Delaware) had placebo effect estimates using lower controls that were larger than Missouri (dashed line, Figure 4, left). Of the 37 states that had upper control neighbors, only one (Delaware) had a placebo effect estimate using upper controls that was larger than Missouri (dashed line, Figure 4, right). Alaska, Hawaii, the District of Columbia, and three states with missing data in either the prestudy, before, or after period were excluded from the analysis.

## CONCLUSIONS AND DISCUSSION

We developed a bracketing method for comparative interrupted time series to account for concerns that history may interact with groups. In a study of the repeal of Missouri’s permit-to-purchase handgun law, the method addressed a concern that on average, control states started out with lower firearm homicide rates than Missouri before the repeal. Comparing both to states that started with higher firearm homicide rates than Missouri and states that started with lower rates, the repeal was associated with a significant increase in firearm



**FIGURE 4.** Histograms of placebo “repeal” effects using different control states. Left, Histogram of placebo difference-in-difference (DiD) estimates using lower control states ( $n = 38$  states with lower control neighbors, includes Missouri). Two states (Oklahoma and Delaware) had a larger estimate than Missouri (dashed line). Right, Histogram of placebo difference-in-difference estimates using upper control states ( $n = 37$  states with upper control neighbors, includes Missouri). One state (Delaware) had a larger estimate than Missouri (dashed line).



homicides, thus strengthening the evidence that the repeal had a causal effect of increasing firearm homicides.

A limitation of our estimated impact of the repeal of Missouri's permit-to-purchase law is that a Stand Your Ground law was simultaneously adopted in Missouri. However, in the original study by Webster et al,<sup>14</sup> the inclusion of a Stand Your Ground indicator in the regression did not dramatically change the estimated effect. Additionally, a recent comparative interrupted time series study examining firearm homicide rates in large urban counties found that permit-to-purchase laws were associated with significant reductions in firearm homicides after controlling for the effects of Stand Your Ground laws.<sup>26</sup> Further evidence that the contemporaneous Stand Your Ground law does not change the qualitative conclusion of our study can be found in the placebo study. There were 16 additional states that adopted Stand Your Ground laws within a few years of Missouri's permit-to-purchase repeal.<sup>26</sup> Only one state (Oklahoma) of the 16 had a difference-in-difference placebo effect estimate using lower controls that were larger than Missouri, and none of the states had placebo effect estimates using upper controls that were larger than Missouri.

Although only one of many potential patterns of bias, the history-by-group interaction bias addressed in this article has been mentioned in the literature since at least the middle of the 20th century. A version of it is referred to selection-maturation interaction in a taxonomy of possible threats to the validity of experimental and quasi-experimental designs presented in Campbell and Stanley.<sup>27</sup> Fundamentally, bracketing relies on constructing control groups across which this potential source of confounding is systematically varied.<sup>28</sup> Other methods for constructing adequate control groups in the presence of history-by-group interactions, such as the synthetic control method,<sup>25</sup> have also found success in comparative case studies of the effect of permit-to-purchase laws on firearm homicide rates.<sup>29</sup> Although we do not argue that bracketing is uniformly superior to the synthetic control method, the practitioner may find that each has strengths that lend themselves to different settings. When the researcher believes that unmeasured history-by-group confounding,  $h(U, p)$ , can be expressed as a linear factor model with time-varying slopes and group-specific loadings, the synthetic control method provides an asymptotically unbiased point estimate of the causal effect of treatment while bracketing can only provide bounds on the treatment effect. However, when the practitioner suspects that only the weaker assumptions of the model outlined in Notation and Model. hold, the bracketing bounds will remain unbiased, in that they contain the true effect in expectation, while the point estimate using synthetic controls need not be unbiased; see eAppendix7; <http://links.lww.com/EDE/B503> for further discussion. A detailed example of such a case can be found in the eAppendix8; <http://links.lww.com/EDE/B503>.

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## **Declaration Exhibit 2**

DOI: 10.1111/1745-9133.12487

CRIMINOLOGY  
& Public Policy**SPECIAL ISSUE ARTICLE****COUNTERING MASS VIOLENCE IN THE UNITED STATES**

# Evidence concerning the regulation of firearms design, sale, and carrying on fatal mass shootings in the United States

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**Research Summary:** We used data from the FBI's Supplemental Homicide Reports and other publicly available databases to calculate state-level annual incidence of fatal mass shootings for 1984–2017. Negative binomial regression models were used to estimate the associations between changes in key gun laws and fatal mass shootings. Handgun purchaser licensing laws and bans of large-capacity magazines (LCMs) were associated with significant reductions in the incidence of fatal mass shootings. Other laws commonly advocated as solutions to mass shootings—comprehensive background checks, assault weapons bans, and de-regulation of civilian concealed carry of firearms—were unrelated to fatal mass shootings.

**Policy Implications:** Our findings suggest that laws requiring firearm purchasers to be licensed through a background check process supported by fingerprints and laws banning LCMs are the most effective gun policies for reducing fatal mass shootings.

**KEY WORDS**

mass shooting, gun regulation, EVALUATION

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High-profile public mass shootings (e.g., incidents that gain significant media attention as a result of high victim count and/or unique characteristic such as location or motive) prompt what have become predictable responses across the political spectrum. One side points to easy firearm access as the key cause of mass shootings and calls for stronger gun laws including comprehensive background checks, bans on assault weapons and large-capacity magazines (if those were used), and more recently, Extreme Risk Protection Order (ERPO) laws to disarm persons planning violent acts. The other side sees unarmed victims being shot in mass shootings and focuses on the hypothetical question, “What if one of the victims or a bystander used a firearm to stop the attack?” The solutions to mass shootings that stem from this perspective include eliminating so-called “gun free zones” and reducing or eliminating restrictions on civilian carrying of concealed firearms in public places.

In a study of fatal mass shootings in the United States during 2014–2017 with several online data sources, Zeoli and Paruk (2020, issue) determined that 46% of the shootings were committed by someone who was prohibited or likely prohibited from possessing a firearm. But the breadth of disqualifying conditions for firearm possession—e.g., whether convictions for violent misdemeanors, domestic violence restraining orders (DVROs) involving dating partners, and younger than 21 years of age disqualify someone from purchasing or possessing a firearm—vary significantly across states and determine the size of the pool of persons at increased risk for perpetrating firearm violence who are legally prohibited from purchasing or possessing firearms (Vittes, Vernick, & Webster, 2012). Indeed, the breadth of disqualifying conditions for persons with a history of violence was consistently associated with reductions in rates of intimate partner homicides (Zeoli et al., 2018). Because many mass shootings are committed in the context of domestic violence or involve perpetrators with a history of domestic violence (Zeoli & Paruk, 2020), broader firearm restrictions for DVROs and violent misdemeanors could potentially reduce mass shootings.

Broad firearm prohibitions for violent or other criminal actions may not keep those individuals from accessing firearms without strong background check systems. State laws requiring comprehensive background checks (CBCs) and purchaser licensing could also potentially influence firearm availability to individuals at risk of perpetrating a mass shooting by making it harder for prohibited persons to obtain firearms. The typical CBC law requires prospective purchasers in private transfers of firearms to pass a background check that is facilitated through a licensed firearm dealer. In contrast, most purchaser licensing laws require prospective purchasers to apply directly at public safety agencies where they are fingerprinted for thorough background checks that include more complete records of prohibiting incidents and greater time available to conduct those checks than is the case for background checks absent licensing. Some licensing laws also require gun safety training, and a few provide officials the ability to use their discretion to deny an applicant if there is good reason to believe he or she might be dangerous (e.g., some history of violence). Rigorous studies of the impact of state CBC laws have not shown that these laws reduce homicides (Castillo-Carniglia et al., 2018; Kagawa et al., 2018; Zeoli et al., 2018); however, there has been consistent evidence that licensing laws reduce homicides (Crifasi et al., 2018; Hasegawa, Webster, & Small, 2019; Rudolph, Stuart, Vernick, & Webster, 2015) and suicides (Crifasi, Meyers, Vernick, & Webster, 2015). Licensing laws could potentially suppress fatal mass shootings, but there are no rigorous studies examining this question.

The research literature on the effects of firearm policies on mass shootings is sparse and has important limitations. A recent study found that that higher rates of gun ownership and greater permissiveness of gun laws were associated with higher rates of fatal mass shootings for incidents connected to domestic violence and other types of mass shootings (Reeping et al., 2019). Unfortunately, the gun law permissiveness scale used in the study has not been fully described, evaluated, or validated, and it does not allow for estimates of the effects of specific firearm laws on mass shootings.<sup>1</sup> Furthermore, the data to identify fatal mass shootings in this study—the FBI’s Supplemental Homicide Reports (SHR)—did

not include major fatal mass shootings, including shootings at Sandy Hook Elementary School in Newtown, Connecticut, in 2012 (26 deaths); a movie theatre in Aurora, Colorado, in 2012 (12 deaths and 58 individuals with nonfatal gunshot wounds); or a church in Southerland Springs, Texas (26 deaths and 20 nonfatally wounded). The data for this study also counted the Virginia Tech mass shooting (32 deaths and 23 victims with nonfatal wounds) as three incidents as a result of the way that the SHR limits the number of victims to 11 in any given homicide incident. Another recent state-level study used an open-source database compiled by the publication *Mother Jones* and found no association between measures of gun ownership and gun law permissiveness and fatal mass shootings in public places (Lin, Fei, Barzman, & Hossain, 2018). The generally undescribed gun law permissiveness measure, however, seemed to be limited to concealed carry restrictions, and the *Mother Jones* database has been criticized for inconsistent application of inclusion/exclusion criteria and for missing some cases (Fox & Fridel, 2016).

Luca and colleagues estimated the effects of several state gun laws—CBC laws that extend background check requirements to private transfers, purchaser licensing laws, regulations over civilians carrying concealed weapons, bans of assault weapons or large-capacity magazines (LCMs)—and the probability that a four-fatality mass shooting occurred in a given state and year during 1989–2014 (Luca, Malhotra, & Poliquin, 2019). Unfortunately, the authors used linear regression models that violated model assumptions for binary outcomes and thus made the findings difficult to interpret.

Two recent studies, each using different data sources and different outcome measures for fatal mass shootings, drew different conclusions regarding the association between the federal ban of assault weapons and LCMs. Fox and Fridel (2016) used the SHR data to examine cases involving four or more firearm homicide victims and found no association between the incidence of fatal mass shootings and the presence of the federal ban of assault weapons and LCMs. It is curious that these researchers did not examine whether the ban influenced the number of persons shot in mass shootings because the characteristics of the banned products are relevant to how many shots can be fired in a short span of time. Indeed, recent studies have documented that fatal mass shootings committed with assault weapons and/or LCMs result in significantly more victims shot than is the case in such shootings which involved no assault weapons or LCMs (Klarevas, 2016; Koper, 2020, this issue; Koper, Johnson, Nichols, Ayers, & Mullins, 2018). DiMaggio and colleagues (2019) published a study in which they reported that during the period when the federal ban of assault weapons and LCMs was in place (1994–2004), fatal mass shootings were 70% less likely to occur. But this study had major limitations based on the data used and the lack of statistical controls for other law changes or social trends that might explain variation in mass shootings. The study used data on fatal public mass shootings with four or more fatalities for the years 1981 through 2017 that were collected by three open-source databases—*Mother Jones*, *Los Angeles Times*, and Stanford University. Inexplicably, the researchers only included cases in their analyses that appeared in all three sources and thereby excluded many incidents of fatal mass shootings. This limited their data to only 51 public mass shootings that presumably were the most widely publicized. The study did not examine variation by state and thus did not consider state gun laws nor did it control for other covariates other than linear trend. Gius (2015) estimated the effects of federal and state bans of assault weapons and LCMs with annual data from the SHR for the years 1982–2011 and found evidence that such bans were linked to lower rates of fatalities in mass shootings. Klarevas, Conner, and Hemenway (2019) found that LCM bans were associated with significantly fewer incidents of high-fatality (six or more victims) mass shootings and lower fatality rates for such shootings during the period 1990–2017. An important limitation of this study was that it did not consider the effects of any other type of firearm laws.

In-depth studies of the circumstances surrounding public mass shootings in the United States during 2000–2017 have found that armed civilians with concealed carry permits played a role in stopping mass

shootings while they are in progress in 5% of the incidents (ALERT & FBI, 2018; Blair & Schwieit, 2014). The presence of armed civilians could also potentially deter some attacks in public places. Conversely, because some mass shootings result from spontaneous responses to conflict, having more people with immediate access to a firearm could spur more mass shootings. The Violence Policy Center (2019) identified 33 incidents between May 2007 and January 2019 in which someone with a permit to carry a concealed firearm shot and killed three or more people in an incident. Prior studies designed to estimate the impact of reducing legal restrictions on civilian concealed gun carrying in public places have been plagued by methodological limitations and have found inconsistent relationships between the adoption of such laws and homicides (Crifasi et al., 2018; Donohue, Aneja, & Weber, 2019; Morral, 2017). As a result, there is great uncertainty about the impact of laws that reduce barriers to civilian gun carrying on fatal mass shootings.

## 1 | METHOD

### 1.1 | Data

This research relied on data obtained from the FBI's SHR, which includes information on the number of victims, the demographics of the offender(s) and victim(s), the weapon(s) used, some circumstances or perpetrator motives, and the relationship between the offender and the first victim. We limited our data set to incidents of homicide that occurred between 1984 and 2017, involved four or more victims (excluding any offender death), and involved a firearm of any type. We excluded any case that was coded as having a connection to gang or narcotic activity because one of our supplemental data sets excludes gang- or narcotic-related events. Other studies that have examined mass shooting frequency have excluded gang and narcotic incidents, so we excluded these incidents to adhere to the current literature (Klarevas, 2016; Lankford, 2016). We also created a variable that indicated whether a shooting involved a domestic relationship because some laws restrict firearm access based on history of domestic violence. We defined domestic relationships broadly, including any offender–victim family relationship, boyfriend/girlfriend, or ex-spouse. Importantly, the offender–victim relationship data in SHR is based on the relationship between the offender and the first victim recorded in the homicide report.

Because SHR data rely on voluntary law enforcement reporting, some homicide data is missing. In particular, exploratory analysis revealed that the SHR did not include several high-profile, high-casualty mass shootings including the 2012 Newtown, CT, school shooting; the 2012 Aurora, CO, movie theater shooting; and the 2017 Sutherland Springs, TX, church shooting. To remedy these and other omissions, we compared the SHR data with data on mass shootings collected by Stanford University (*Stanford Mass Shootings in America, courtesy of the Stanford Geospatial Center and Stanford Libraries*, n.d.) for the years 1984–2017 and the Gun Violence Archive for the years 2014–2017 (*Mass Shootings in 2017*, n.d.) and added any missing incidents to our data set.<sup>2</sup> We followed Zeoli et al. (2018) in excluding Florida, Kansas, Kentucky, Nebraska, and Montana from our analysis because of systemic Uniform Crime Reports (UCR)–SHR reporting issues over multiple years.

Data on gun laws were collected and coded using traditional legal research methods. We included several state-level statutes: concealed carry laws, handgun purchaser licensing laws that require either in-person application or fingerprinting, laws requiring point-of-sale background checks only, firearm prohibitions for subjects of domestic violence restraining orders that include ex parte orders, firearm prohibitions for subjects of domestic violence restraining orders that include dating partners in the



definition of domestic violence, firearm prohibitions for subjects of domestic violence restraining orders that do not include ex parte orders or dating partners, laws requiring surrender of all firearms by subjects of domestic violence restraining orders, firearm prohibitions for violent misdemeanants, assault weapon bans, and large-capacity magazine bans. Some of the legal data was obtained from prior work (Zeoli et al., 2018). We obtained any missing legal data from the Thomson Reuters Westlaw database. Using Westlaw, Hein Online, and Lexis Nexis, we tracked each state's statutory history to determine when each law was enacted. Each collected law was compared with existing publicly available databases of state gun laws (Everytown; Giffords; *State Firearm Laws*). Any conflicts between our data set and the databases was resolved by reevaluating the statutory or legislative text. Specific laws and the states and time periods in which they were in effect are presented in Table 1. For our analysis, we coded the laws using a binary 0–1 variable that was only equal to 1 in a year in which a given state law was in effect for at least half of the year.

Our demographic control variables included a commonly used proxy measurement of gun ownership (proportion of all suicides where the chosen method was a firearm), state unemployment rate, poverty rate, percent population identified as male, percent population identified as Black, percent married, percent divorced, percent military veteran, percent living in an Metropolitan Statistical Area, ethanol consumption per capita, religious adherence, percent with a high school diploma, the drug overdose rate (estimated by the rate of nonsuicide overdose deaths), and the proportion of the population aged 15–24 years. These variables were gathered from the U.S. Census Bureau (Census), the Centers for Disease Control and Prevention (CDC), the Bureau of Labor Statistics (BLS), the Religion and Congregation Membership Survey (ARDA), and the National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2017). Missing years of demographic data were interpolated. These control variables were selected based on prior research on firearm homicide and suicide (Crifasi et al., 2015; Rudolph et al., 2015; Zeoli et al., 2018).

## 1.2 | Analysis

We used generalized linear models with a negative binomial distribution to conduct pooled time-series analyses of three dependent variables measured at the state-year level: domestic-linked mass shootings, non-domestic-linked mass shootings, and all mass shootings. All three are overdispersed count variables. In addition to analyzing incidents of fatal mass shootings, we also analyzed the number of victim fatalities in fatal mass shootings as an outcome variable. The models included state fixed effects, the law variables, and the sociodemographic covariates as well as linear and quadratic trend terms to control for unmeasured conditions that may have influenced fatal mass shootings during the study period. In addition to the full models with all covariates, we examined parsimonious models that limited the sociodemographic control variables with coefficients in the full model that had  $p$  values less than .10. All models used a negative binomial distribution with robust standard errors accounting for clustering by state and with overall state population as the exposure variable.

We also performed several sensitivity analyses. To provide a more flexible control for unmeasured national trends, we substituted year fixed effects for the linear and quadratic trend terms in our models. Prior work has suggested that LCM and assault weapon bans might phase in gradually because of pre-ban spikes in purchasing and production (Koper, Woods, & Roth, 2004). To examine this, we ran our models with state LCM bans and state and federal assault weapon bans coded to phase in gradually, starting with .2 in year 1 and increasing .2 per year until hitting 1 in year 5. To evaluate whether specific, high-profile mass shooting incidents might be leading to policy adoption, we ran our models without specific observations for the years just prior to policy implementation.

**TABLE 1** Federal and state laws examined and dates those laws went into in effect or were repealed

State	Private Transfer Laws				Prohibitions Related to Domestic Violence Restraining Orders (DVROs)			
	Assault Weapon Ban	Large-Capacity Magazine Ban	Purchaser licensing with in-person or fingerprinting	Point-of-sale background check only	Final DVRO only	Includes ex parte orders	Includes dating partners	Includes surrender provision
Alabama					9/1/15			
Alaska							7/1/96	7/1/96
Arizona					7/20/96–7/21/97	7/21/97	9/30/09	7/20/96
Arkansas								
California	12/31/91	1/1/00		1/1/91		1/1/95	1/1/91	1/1/95
Colorado		7/1/13		7/1/13	7/1/13		2/26/94– 11/30/98	7/1/13
Connecticut	7/1/94	4/4/13	10/1/95		10/1/94–10/1/99	10/1/16	10/1/99	10/1/94
Delaware				7/1/13		1/16/94	9/18/07	1/16/94
Georgia								
Hawaii			pre-1984		6/10/93–7/1/94	7/1/94	6/7/00	6/10/93
Idaho								
Illinois						1/1/10	1/1/96	1/1/96
Indiana				pre-1984– 11/30/98			7/1/02	7/1/02
Iowa			pre-1984		7/1/10			7/1/10
Louisiana							8/1/14	
Maine					9/19/97–9/13/03	9/13/03		9/13/03
Maryland	10/1/13	8/1/94	10/1/13	10/1/96–10/1/13	10/1/96–10/1/09	10/1/09	10/1/15	10/1/96
Massachusetts	10/21/98	10/21/98	pre-1984		7/1/94	7/1/94	7/1/94	7/1/94
Michigan			pre-1984– 12/18/12				4/1/96	
Minnesota							8/1/14	8/1/14

(Continues)



TABLE 1 (Continued)

State	Assault Weapon Ban	Large-Capacity Magazine Ban	Private Transfer Laws		Prohibitions Related to Domestic Violence Restraining Orders (DVROs)			
			Purchaser licensing with in-person or fingerprinting	Point-of-sale background check only	Final DVRO only	Includes ex parte orders	Includes dating partners	Includes surrender provision
Mississippi								
Missouri			pre-1984– 8/28/07					
Nevada				1/1/17			10/1/07	10/1/07
New Hampshire						1/1/00	1/1/00	1/1/00
New Jersey	5/1/90	5/1/90	pre-1984			11/11/91	8/11/94	8/11/94
New Mexico								
New York	11/1/00	11/1/00	pre-1984			11/1/96	7/21/08	11/1/96
North Carolina					12/1/95–12/1/97	12/1/03	12/1/97	12/1/03
North Dakota								
Ohio								
Oklahoma								
Oregon				8/9/15	1/1/16			
Pennsylvania				10/11/95		5/9/06	12/5/94	12/5/94
Rhode Island				pre-1984		7/1/17	7/1/05	7/1/05
South Carolina					6/4/15			
South Dakota								
Tennessee				5/10/94–11/1/98	7/1/09			7/1/09
Texas						1/1/08	9/1/01	
Utah						7/1/95		
Vermont							2/2/01	
Virginia						7/1/94		

(Continues)

TABLE 1 (Continued)

Private Transfer Laws					Prohibitions Related to Domestic Violence Restraining Orders (DVROs)				
State	Assault Weapon Ban	Large-Capacity Magazine Ban	Purchaser licensing with in-person or fingerprinting	Point-of-sale background check only	Final DVRO only	Includes ex parte orders	Includes dating partners	Includes surrender provision	
				12/4/14		7/1/94	7/23/95	7/1/94	
Washington									
West Virginia						4/14/01	6/2/98		
Wisconsin					4/1/96–7/30/02		7/30/02	4/1/96	
Wyoming									
Concealed Carry Permitting Laws					Violent Misdemeanor Prohibition				
State	No issue	May issue	Shall issue with discretion	Strict shall issue	Permitless carry				
Alabama		pre-1984–8/1/13	8/1/13	10/1/94–9/9/03	9/9/03	9/1/15			
Alaska	pre-1984– 10/1/94								
Arizona	pre-1984– 7/16/94			7/16/94–7/28/10	7/28/10				
Arkansas	pre-1984– 7/27/94		7/27/94			1/1/91			
California		pre-1984							
Colorado		pre-1984– 5/17/03	5/17/03						
Connecticut		pre-1984				10/1/94			
Delaware		pre-1984							
Georgia		pre-1984– 8/25/89	8/25/89						
Hawaii		pre-1984				6/13/88			
Idaho		pre-1984–7/1/90		7/1/90–7/1/16	7/1/16				
Illinois	pre-1984–1/5/14		1/5/14			1/1/96			

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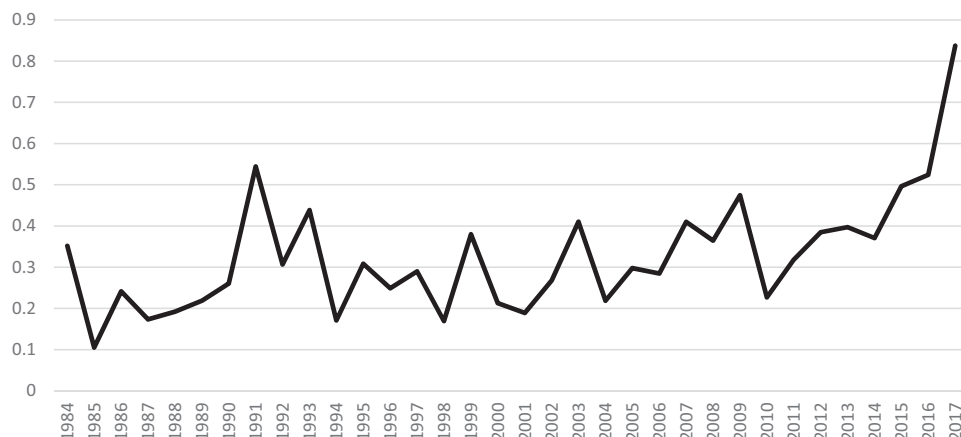
TABLE 1 (Continued)

State	Concealed Carry Permitting Laws			Violent Misdemeanor Prohibition
	No issue	May issue	Shall issue with discretion	
Indiana			pre-1984	
Iowa		pre-1984–1/1/11	1/1/11	
Louisiana	pre-1984– 4/19/96		4/19/96	
Maine			pre-1984– 10/15/15	10/15/15
Maryland		pre-1984		10/1/96
Massachusetts		pre-1984		
Michigan		pre-1984–7/1/01	7/1/01	
Minnesota		pre-1984– 5/28/03	5/28/03	8/1/03
Mississippi	pre-1984–7/1/91			
Missouri	pre-1984– 2/26/04		2/26/04–1/1/17	4/15/16
Nevada		pre-1984– 10/1/95		1/1/17
New Hampshire			pre-1984– 2/22/17	2/22/17
New Jersey		pre-1984		
New Mexico	pre-1984–1/1/04		1/1/04	
New York		pre-1984		pre-1984
North Carolina	pre-1984– 12/1/95		12/1/95	

(Continues)

TABLE 1 (Continued)

State	Concealed Carry Permitting Laws				Violent Misdemeanor Prohibition
	No issue	May issue	Shall issue with discretion	Strict shall issue	Permitless carry
North Dakota	pre-1984–8/1/85			8/1/85–8/1/17	8/1/17
Ohio	pre-1984–4/8/04			4/8/04	
Oklahoma	pre-1984–9/1/95			9/1/95	
Oregon		pre-1984–1/1/90	1/1/90		
Pennsylvania		pre-1984– 6/17/89	6/17/89		
Rhode Island			pre-1984		
South Carolina		pre-1984– 8/23/96		8/23/96	
South Dakota		pre-1984–7/1/85		7/1/85	
Tennessee	pre-1984– 11/1/89	11/1/89–10/1/96		10/1/96	
Texas	pre-1984–1/1/96			1/1/96	
Utah		pre-1984–5/1/95	5/1/95		
Vermont					pre-1984
Virginia		pre-1984–7/1/95	7/1/95		7/1/15
Washington				pre-1984	
West Virginia		pre-1984–7/7/89		7/7/89–5/24/16	5/24/16
Wisconsin	pre-1984– 11/1/11			11/1/11	
Wyoming		pre-1984– 10/1/94	10/1/94–7/1/11		7/1/11



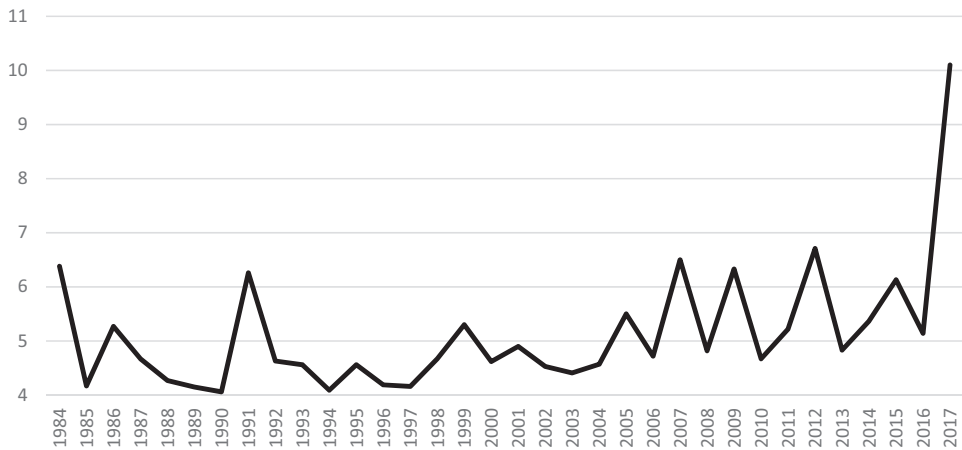
**FIGURE 1** Victims in fatal mass shootings per 1 million population per year, 1984–2017

We also examined whether our findings changed when the cutoff for defining a fatal mass shooting was five or more victims and six or more victims. All models were estimated in Stata/IC 15.1 (StataCorp).

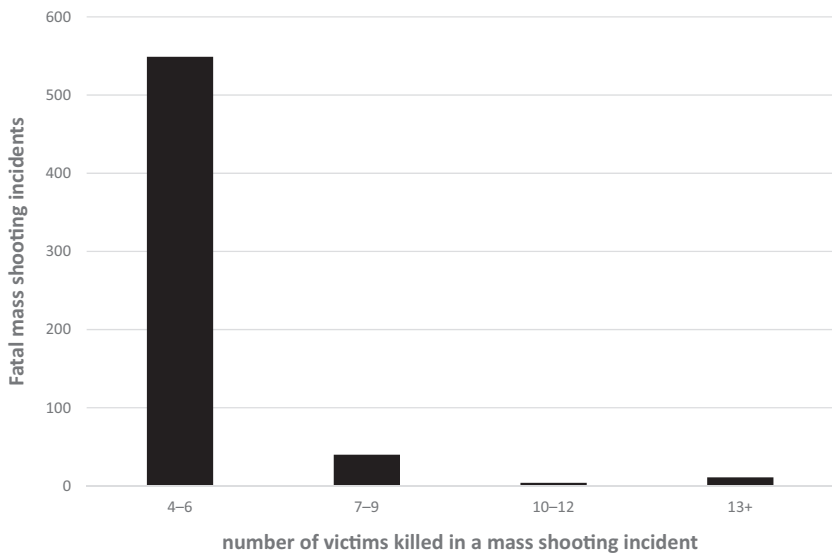
## 2 | RESULTS

We identified 604 mass shooting incidents involving four or more murdered victims that met our inclusion criteria (no gang- or drug-related shootings) during the 1984–2017 study period. There were 2,976 victims murdered in these incidents, 842 (28.3%) in domestic-related shootings, 2,057 (69.1%) victims in non-domestic-related shootings, and 77 victims in all shootings in which it was unclear whether the shooting was domestic related. The annual rate of mass shooting fatalities per 1 million population nationwide was .36 per 100,000 population and ranged from 0 in Delaware and Rhode Island to .88 in South Carolina (see Table A1 in the Appendix). This rate was stable through most of the study period, drifted upward during 2007–2014, before accelerating between 2014 and 2017 (Figure 1). The mean number of victim fatalities by gunfire per incident during the study period was 4.93; victim fatalities were somewhat higher during the years after the federal ban of assault weapons and LCMs expired compared with the decade during which the ban was in place (5.85 during 2005–2017 vs. 4.59 during 1995–2004; Figure 2). Most shootings had four to six victims (Figure 3). A list of descriptive statistics for independent variables can be found in Table 2.

The estimates from the full negative binomial models (Table 3) indicate that handgun purchaser licensing laws requiring in-person application with law enforcement or fingerprinting were associated with incidents of fatal mass shootings 56% lower than that of other states (internal rate of return [IRR] = 0.44, 95% confidence interval [CI] 0.26, 0.73). For LCM bans, the IRR estimate (0.52, 95% CI = 0.27, 0.98) indicates a 48% lower risk of fatal mass shootings associated with the policy. We found no evidence that concealed carry laws, assault weapons bans, prohibitions for domestic abusers and violent misdemeanants, or point-of-sale CBC laws were associated with the incidence of fatal mass shootings. In models in which the number of mass shooting victim fatalities was the outcome, handgun purchaser licensing was protective (IRR = 0.44, 95% CI 0.24, 0.82) and the point estimate for LCM bans suggests a large protective effect albeit with a wide confidence interval (IRR = 0.30, 95% CI .08, 1.10) that make inferences less certain.



**FIGURE 2** Mean number of victims murdered per incident in shootings involving 4+ victim fatalities, 1984–2017



**FIGURE 3** Number of incidents of fatal mass shootings by the number of victims killed, united states, 1984–2017

Models for the incidence of mass shootings with domestic or intimate partner violence links revealed no significant associations with laws prohibiting firearms for domestic violence abusers or violent misdemeanants, or purchaser licensing laws (Table 4). LCM bans, however, were associated with a 61% lower rate of domestic mass shootings (IRR = 0.39, 95% CI 0.21, 0.73). The association for LCM bans was somewhat stronger in models for the number of victim fatalities in mass shootings (IRR = 0.25, 95% CI 0.11, 0.59). CBC laws were associated with large increases in domestic mass shooting victim counts (IRR = 2.23, 95% CI 1.10, 4.51).

Purchaser licensing laws were associated with a 62% lower incidence of non-domestic-linked fatal mass shootings (IRR = 0.38, 95% CI 0.20, 0.70) in the full model (Table 5). If the proxy for gun ownership is left out of the model, the IRR is similar (IRR = 0.39, 95% CI 0.22, 0.67). LCM bans were

**TABLE 2** Descriptive statistics for independent variables used in the analyses

Variable	Mean	Min	Max	SD
Concealed carry permits—May issue as reference	.14	0	1	.35
No issue				
Shall issue with discretion	.21	0	1	.41
Strict shall issue	.28	0	1	.45
Permitless	.05	0	1	.21
Purchaser licensing with discretion	.07	0	1	.25
Purchaser licensing in-person application/fingerprint required	.17	0	1	.37
Comprehensive background check—point of sale	.09	0	1	.28
DVRO firearm prohibition w/ final order, no dating partners	.04	0	1	.20
DVRO firearm prohibition includes ex parte	.22	0	1	.41
DVRO firearm prohibition includes dating partners	.27	0	1	.44
DVRO firearm prohibition surrender provision	.28	0	1	.45
Violent misdemeanor	.13	0	1	.34
Federal assault weapon ban	.29	0	1	.46
State assault weapon ban	.08	0	1	.26
Large-capacity magazine ban	.08	0	1	.27
Gun ownership (firearm suicides/all suicides)	.56	.13	.87	.14
Unemployment (%)	5.76	2.3	14.8	1.91
Percent in poverty	12.84	2.9	27.2	3.79
Percent male	49.16	47.63	52.71	.87
Percent Black	10.91	.28	38.29	9.77
Percent married	54.81	42.26	67.64	4.93
Percent divorced	10.31	4.78	16.54	2.03
Percent veteran	13.10	4.00	21.88	3.87
Percent living in MSA	70.09	14.94	100	19.94
Ethanol consumption per capita	2.40	1.23	5.10	.54
Religious adherence (%)	50.62	22.43	83.97	11.57
Percent Completed high school	83.30	62.59	92.8	5.87
Drug overdose rate	7.30	.14	55.26	6.55
Log proportion aged 15–24	−1.93	−2.15	−1.61	.09

Note. DVRO = domestic violence restraining order; MSA = Metropolitan Statistical Area; SD = standard deviation. Models also include state fixed effects, linear and quadratic time trend terms.

\* $p = .05$ .

linked with a lower incidence of non-domestic-linked fatal mass shootings in the parsimonious model (IRR = .34, 95% CI .14, .81); however, the IRR estimate for LCM bans of .65 and was not statistically significant in the full model. None of the other firearm laws were associated with the incidence of non-domestic-linked fatal mass shootings.

## 2.1 | Sensitivity Analyses

The models that assumed gradual effects for bans of assault weapons and large capacity magazines produced somewhat different results (Tables A2–A4). The negative association between LCM bans



**TABLE 3** Estimates for incident rate ratio for the incidence of fatal mass shootings

Variable	Incidents ( <i>n</i> = 604)		Victim Deaths ( <i>n</i> = 2,976)	
	IRR	95% CI	IRR	95% CI
Concealed carry permits—May issue as reference	.93	[.55, 1.58]	1.53	[.82, 2.85]
No issue				
Shall issue with discretion	.91	[.51, 1.60]	1.14	[.60, 2.19]
Strict shall issue	1.28	[.72, 2.27]	1.44	[.70, 2.94]
Permitless	1.29	[.50, 3.29]	1.02	[.32, 3.28]
Purchaser licensing in-person application/fingerprint required	<b>.44*</b>	[.26, .73]	<b>.43*</b>	[.26, .73]
Comprehensive background check—point of sale	1.10	[.77, 1.58]	1.43	[.74, 2.77]
DVRO firearm prohibition w/ final order, no dating partners	.86	[.42, 1.77]	.72	[.33, 1.59]
DVRO firearm prohibition includes ex parte	1.10	[.76, 1.58]	1.13	[.71, 1.77]
DVRO firearm prohibition includes dating partners	.89	[.56, 1.42]	.91	[.50, 1.65]
DVRO firearm prohibition surrender provision	.76	[.50, 1.16]	.75	[.44, 1.27]
Violent misdemeanor	1.51	[.79, 2.89]	1.25	[.63, 2.46]
Federal assault weapon ban	.92	[.67, 1.26]	.96	[.63, 1.46]
State assault weapon ban	.71	[.34, 1.48]	1.11	[.30, 4.16]
Large-capacity magazine ban	<b>.52*</b>	[.27, .98]	.30	[.08, 1.10]
Gun ownership	.15	[.00, 4.76]	.96	[.93, 1.00]
Unemployment	1.03	[.95, 1.10]	1.02	[.92, 1.13]
Percent in poverty	1.01	[.95, 1.07]	1.00	[.93, 1.07]
Percent male	.80	[.37, 1.70]	.84	[.36, 1.94]
Percent Black	1.07	[.91, 1.26]	1.18	[.96, 1.45]
Percent married	1.03	[.94, 1.13]	1.00	[.89, 1.11]
Percent divorced	1.03	[.80, 1.32]	.99	[.74, 1.32]
Percent veteran	<b>.86*</b>	[.75, .99]	.92	[.78, 1.09]
Percent living in MSA	1.00	[.98, 1.03]	1.00	[.97, 1.02]
Ethanol consumption per capita	1.10	[.40, 3.03]	.80	[.24, 2.69]
Religious adherence	1.01	[.97, 1.06]	.99	[.93, 1.04]
Percent completed high school	1.05	[.98, 1.13]	1.06	[.97, 1.16]
Drug overdose rate	1.01	[.97, 1.05]	.99	[.95, 1.03]
Log proportion aged 15–24	<b>.06*</b>	[.00, .99]	.99	[.95, 1.03]

Note. CI = confidence interval; DVRO = domestic violence restraining order; IRR = incident rate ratio; MSA = Metropolitan Statistical Area; SD = standard deviation. Models also include state fixed effects, linear and quadratic time trend terms.

\**p* = .05.

and total fatal mass shootings (IRR = 0.74, 95% CI 0.42, 1.31) and the number of victims killed in mass shootings (IRR = 0.38, 95% CI 0.10, 1.44) was no longer statistically significant in the full model, but it was associated with lower incidence in the parsimonious model for all fatal mass shootings (IRR = 0.54, 95% CI 0.29, 1.00). For domestic-linked mass shootings, LCM bans were associated with lower incidence in the parsimonious model for (IRR = 0.58, 95% CI 0.36, 0.94) and with fewer victim fatalities in the full model (IRR = 0.31, 95% CI 0.11, 0.86). Purchaser licensing laws were associated with lower incidence of total fatal mass shootings (IRR = 0.46, 95% CI 0.27, 0.77) and lower incidence rates for non-domestic-linked fatal mass shootings (IRR = 0.42, 95% CI 0.22, 0.77).

**TABLE 4** Estimates for incident rate ratio for domestic-linked mass shootings

Variable	Incidents ( <i>n</i> = 182)		Victim Deaths ( <i>n</i> = 842)	
	IRR	95% CI	IRR	95% CI
Concealed Carry Permit—May issue reference	.66	[.26, 1.68]	.74	[.27, 2.08]
No issue				
Shall issue w/discretion	.98	[.41, 2.34]	.81	[.33, 2.00]
Strict shall issue	.90	[.33, 2.46]	.78	[.25, 2.48]
Permitless	2.33	[.35, 15.70]	1.43	[.16, 13.21]
Purchaser licensing in-person application or fingerprint required	.93	[.39, 2.19]	1.43	[.60, 3.39]
Comprehensive background checks—point of sale	1.88	[.92, 3.85]	<b>2.22*</b>	[1.10, 4.50]
DVRO prohibition—final orders, dating partner excluded	.89	[.31, 2.56]	.69	[.22, 2.13]
DVRO prohibition ex parte included	1.51	[.84, 2.71]	1.42	[.74, 2.74]
DVRO includes dating partners	.91	[.57, 1.43]	.80	[.50, 1.30]
DVRO surrender required	.85	[.45, 1.64]	.82	[.40, 1.67]
Violent misdemeanor prohibition	1.86	[.45, 7.69]	2.08	[.57, 7.60]
Federal assault weapons/LCM ban	.87	[.50, 1.51]	.84	[.46, 1.55]
State assault weapons ban	.40	[.14, 1.19]	.42	[.13, 1.32]
Large-capacity magazine ban	<b>.39*</b>	[.21, .73]	<b>.25*</b>	[.11, .59]
Gun ownership	.06	[.00, 8.9]	.96	[.89, 1.04]
Unemployment	1.05	[.91, 1.21]	1.09	[.92, 1.29]
Percent in poverty	1.01	[.89, 1.15]	1.00	[.87, 1.14]
Percent male	1.02	[.28, 3.68]	1.08	[.23, 5.03]
Percent Black	1.00	[.81, 1.24]	1.03	[.81, 1.30]
Percent married	.96	[.82, 1.13]	.97	[.82, 1.16]
Percent divorced	.90	[.61, 1.32]	.91	[.58, 1.43]
Percent veteran	1.00	[.83, 1.22]	1.08	[.89, 1.31]
Percent living in MSA	1.00	[.95, 1.05]	.98	[.93, 1.03]
Ethanol consumption per capita	.91	[.14, 6.00]	.79	[.11, 5.78]
Religious adherence	1.02	[.94, 1.10]	1.00	[.92, 1.08]
Percent completed high school	1.02	[.91, 1.14]	.99	[.88, 1.12]
Drug overdose rate	.98	[.92, 1.04]	.97	[.91, 1.04]
Log proportion aged 15–24	1.26	[.02, 95.3]	1.02	[.78, 1.34]

Note. CI = confidence interval; DVRO = domestic violence restraining order; IRR = incident rate ratio; MSA = Metropolitan Statistical Area; SD = standard deviation. Models also include state fixed effects, linear and quadratic time trend terms.

\**p* = .05.

When we used year fixed effects to account for unmeasured national trends in mass shootings, our point estimates for the gun law variables were similar to those in our primary models with linear and quadratic trend terms; however, the confidence intervals for the estimates expanded and the association between LCM bans and the incidence (.56, 95% CI .27, 1.16) and fatalities for all mass shootings (IRR = .37, 95% CI .11, 1.31) were no longer statistically significant at the .05 level (Table A5). Negative associations for LCM bans and the incidence and number of fatalities for domestic-linked mass shootings and negative associations between purchaser licensing and non-domestic-linked mass

**TABLE 5** Estimates for models for mass shooting incidents not linked to domestic violence

Variable	Incidents ( <i>n</i> = 401)		Victim Deaths ( <i>n</i> = 2,057)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference No issue	1.02	[.51, 2.05]	1.82	[.85, 3.90]
Shall issue with discretion	.84	[.38, 1.86]	1.19	[.50, 2.79]
Strict shall issue	1.52	[.86, 2.70]	1.83	[.89, 3.79]
Permitless	.68	[.26, 1.79]	1.10	[.25, 4.81]
Purchaser licensing in-person or fingerprint required	<b>.38*</b>	[.21, .70]	<b>.35*</b>	[.19, .63]
Comprehensive background check—point of sale	.84	[.48, 1.47]	1.09	[.44, 2.70]
DVRO prohibition—final orders, dating partner excluded	.88	[.32, 2.44]	.72	[.24, 2.19]
DVRO prohibition includes Ex Parte	1.02	[.53, 1.96]	1.17	[.59, 2.30]
DVRO prohibition Inc. Dating Partners	.88	[.44, 1.77]	.94	[.40, 2.19]
DVRO prohibition with Surrender Provision	.75	[.35, 1.60]	.84	[.35, 1.99]
Violent misdemeanor prohibition	1.32	[.65, 2.68]	.94	[.46, 1.91]
Federal assault weapon ban	.98	[.65, 1.46]	1.11	[.67, 1.85]
State assault weapon ban	.73	[.31, 1.72]	1.01	[.25, 4.11]
Large capacity magazine ban	.65	[.26, 1.63]	.43	[.10, 1.81]
Gun ownership	.77	[.01, 47.8]	.97	[.93, 1.02]
Unemployment	1.04	[.97, 1.11]	1.02	[.93, 1.12]
Percent in poverty	1.00	[.93, 1.07]	.98	[.90, 1.07]
Percent male	.67	[.26, 1.68]	.66	[.24, 1.81]
Percent Black	1.08	[.87, 1.33]	1.26	[.93, 1.69]
Percent married	1.06	[.92, 1.22]	.98	[.84, 1.14]
Percent divorced	1.10	[.77, 1.56]	.94	[.64, 1.38]
Percent Veteran	<b>.79*</b>	[.66, .96]	.89	[.70, 1.13]
Percent living in MSA	1.01	[.98, 1.05]	1.01	[.97, 1.06]
Ethanol consumption per capita	1.20	[.26, 5.50]	.93	[.15, 5.78]
Religious adherence	1.01	[.95, 1.08]	.99	[.91, 1.07]
Percent completed high school	1.05	[.94, 1.18]	1.09	[.96, 1.23]
Drug overdose rate	1.03	[.99, 1.08]	1.01	[.96, 1.06]
Log proportion aged 15–24	.02	[.00, 1.46]	.78	[.53, 1.15]

*Note.* CI = confidence interval; DVRO = domestic violence restraining order; IRR = incident rate ratio; MSA = Metropolitan Statistical Area; SD = standard deviation. Models also include state fixed effects, linear and quadratic time trend terms.

\**p* = .05.

shootings were consistent with our primary models (Tables A6–A7). When we used Poisson fixed-effects regression models, our estimates for the association between the firearm laws of interest and fatal mass shootings were consistent with the estimates in our primary models (Tables A8–A10).

To evaluate whether particularly fatal mass shootings led to passage of the policies at interest, we conducted an analysis that omitted certain observations. We determined that, after a mass shooting with 10 or more fatalities, only two states adopted a law that showed a statistically significant effect in our main models: Connecticut and Colorado both adopted LCM bans after major mass shootings in 2012. We omitted the 2012 observations for these two states and repeated our analysis. When these

observations were omitted, the point estimate for purchaser licensing was similar to our main model of all mass shooting incidents (IRR = .40, 95% CI .23, .69; Table A11) and fatalities (IRR = .33, 95% CI .19, .59). Similarly purchaser licensing was associated with reductions in non-domestic-linked mass shootings (IRR = .38, 95% CI .20, .70; Table A13) and fatalities (IRR = .34, 95% CI .18, .62). For all mass shootings, LCM bans estimates were similar to our primary models but no longer statistically significant for incidents (IRR = .56, 95% CI .30, 1.03; Table A11) and fatalities (IRR = .40, 95% CI .14, 1.14). LCM bans were statistically significant and protective for domestic-linked mass shooting incidents (IRR = .46, 95% CI .23, .89; Table A12) and fatalities (IRR = .45, 95% CI .22, .91).

In the models using different victim fatality thresholds for mass-shootings (five and six victims), the data were too sparse to stratify by domestic violence link. When mass shootings were limited to those with five or more victims ( $n = 198$  shootings), LCM bans were associated with an 80% lower incidence in the full model (IRR = .20, 95% CI .06, .67; Table A14). Although the point estimate for purchaser licensing laws was similar to that for the models with four victim fatality thresholds, it was not statistically significant (IRR = .52, 95% CI .15, 1.83). The estimate for No Issue concealed carry permit laws did change dramatically with the five-fatality threshold and was associated with much higher incidence of fatal mass shootings (IRR = 4.14, 95% CI 1.57, 10.87; Table A14). No Issue concealed carry laws no longer exist, however, as every state now allows for some form of civilian concealed carry. Similarly, when mass shootings were limited to those with six or more victims (Table A15), LCM bans were associated with an 87% lower incidence in the full model (IRR = .14, 95% CI .03, .70) and purchaser licensing laws were not associated with any change.

### 3 | DISCUSSION

The rate at which Americans are murdered in mass shootings has increased in recent years. For decades, horrific mass shootings have prompted intense political debates about whether such incidents can be prevented and what would be the most effective policy responses. Prior research on the effects of firearm policies on fatal mass shootings has important limitations, leaving questions about the effectiveness of strengthened gun regulations such as comprehensive background checks or policies that have been implemented to encourage more civilian gun carrying in public places.

The findings of this study suggest that the most common policy prescriptions offered by advocates on each side of the debate over gun control—comprehensive background checks and assault weapons bans on one side and so-called “Right to Carry” laws reducing restrictions on civilian concealed carry of firearms on the other side—do not seem to be associated with the incidence of fatal mass shootings. Twenty-eight percent of the shootings in this study had some connection to domestic violence, yet we found no evidence that laws designed to keep firearms from perpetrators of domestic violence have affected mass shootings connected to domestic violence. This is somewhat surprising given prior research demonstrating that laws prohibiting persons under domestic violence restraining orders from possessing firearms or with prior convictions for violent misdemeanors were associated with reduced intimate partner homicides (Zeoli et al., 2018).

This study identified two policies associated with reductions in fatal mass shootings—laws requiring firearm purchasers or owners to acquire a license that involves in-person application and/or fingerprinting of applicants and state laws banning the purchase of LCMs or ammunition-feeding devices for semiautomatic firearms. The size of the estimated protective effects of these two policies are striking, although there are large confidence intervals. Firearm purchaser or owner licensing laws have been shown to reduce firearm homicides (Crifasi et al., 2018; Hasegawa, Small, & Webster, 2019; Rudolph et al., 2015; Webster, Crifasi, & Vernick, 2014) and suicides (Crifasi et al., 2015); thus, it

is plausible that these laws reduce firearm availability to individuals who are at risk of committing many forms of lethal violence including multivictim fatal shootings. States with licensing requirements for firearm purchasers typically review broader types of data to identify conditions that prohibit firearm possession and use fingerprints to identify individuals with criminal histories rather than rely solely on biographical information provided by the applicant. In addition, rigorous firearm purchaser licensing may also reduce illegal straw sales and other types of diversion of guns for criminal use (Crifasi, Buggs, Choksy, & Webster, 2017).

Assault rifles are commonly used in mass shootings with the most casualties, and certain design features of these weapons plausibly facilitate the ability of an assailant to rapidly shoot many rounds (e.g., barrel shrouds and pistol grips). But the capacity of the ammunition-feeding device and the ability to quickly reload may be the most relevant feature of firearms that influence the incidence and outcomes of mass shootings. Furthermore, most mass shootings do not involve assault rifles, but many involve the use of LCMs. This may explain why we found that LCM bans were associated with significant reductions in the incidence of fatal mass shootings but that bans on assault weapons had no clear effects on either the incidence of mass shootings or on the incidence of victim fatalities from mass shootings. Studies that have collected detailed data on the specific firearms used in fatal mass shootings show that firearms with LCMs are used roughly twice as frequently as firearms identified as assault weapons. In the Koper et al. (2018) study of mass shootings with four or more victim fatalities during 2009–2016, 19% involved firearms with an LCM and 10% involved firearm models classified as assault weapons. Additionally, Klarevas (2016) found that, during 2006–2015 (after the federal ban expired), 67% of mass shootings with six or more victim fatalities involved the use of an LCM versus 26% with an assault weapon model. Based on the data from Koper (2020), Koper et al. (2018), and Klarevas (2016), our point estimates may be somewhat higher than would be plausible based on the prevalence of LCM use in fatal public mass shootings, although the confidence intervals for these estimates are wide and encompass the estimates of the prevalence of use of LCMs in fatal mass shootings. Also, Koper (2013) found no evidence of decreased use of LCMs in the years after the federal ban in data from four cities that collected such data. This suggests that the supply of pre-ban LCMs was plentiful and that LCMs bans may take years to sufficiently reduce their availability for criminal misuse. Yet our models estimating gradual effects of state LCM bans showed weaker law effects than did the models assuming immediate effects. Passage of LCM bans may coincide with unmeasured factors related to protection against fatal mass shootings other than the comprehensive list of firearm laws examined here. Regardless, there is a clear functional link between LCMs and the ability of a shooter to take more lives. Our estimates of LCM ban impacts show the largest protective effects on high-fatality count shootings and on the number of victims murdered in mass shootings, and the point estimates are large in all model specifications.

It should be noted that the federal assault weapons ban and some state bans of assault weapons have resulted in gun manufacturers making slight alterations in the characteristics of weapon models that are banned. These newer models, assault weapons that were grandfathered by the bans, and the ability to purchase components of assault weapons online provide substitutes for the banned firearms for individuals considering carrying out acts of mass violence. LCM bans may be less likely to result in acquisition of equivalent substitutes as is the case for assault weapon bans.

There are limitations to this study that relate to the lack of systematic data at the state level on determinants of mass shootings that would aid in the modeling of state-level trends of rare events. We drew from prior research on factors associated with state-level rates of homicides and suicides. Mass shootings involve a very small proportion of such events, however, and the conditions that facilitate or suppress lethal violence overall may not explain rare and especially lethal mass shooting events. In addition, this study was not designed to fully explore the relationship between assault weapon bans and their

impact on fatal mass shootings. We did not examine, for example, whether the bans influenced the incidence of assault weapons being used in mass shootings because such data are not available for all fatal mass shootings. We also only examined fatal mass shootings, in which the number of fatalities rather than casualties determined whether an incident was included in the analysis. Booty, O'Dwyer, Webster, McCourt, and Crifasi (2019) have raised the issue of inconsistencies in mass shooting databases that define "mass shooting" differently, and we acknowledge that our results are influenced by the definition that we have chosen.

Despite these limitations, our estimates of the effects of state and federal gun laws on fatal mass shootings are mainly robust to different modeling assumptions and consistent with other research findings. Firearm purchaser licensing requirements are likely to reduce overall firearm availability within a state as well as reduce firearm availability to high-risk individuals. This study provides evidence that firearm purchaser or ownership licensing with fingerprinting reduce the risk of fatal mass shootings in addition to firearm homicides more broadly. LCM bans also seem to reduce the incidence of fatal mass shootings and the number of fatalities in mass shootings. Policy makers should consider these findings when crafting proposals to reduce deaths from mass shootings.

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## ENDNOTES

<sup>1</sup> The researchers used *Traveler's Guide to the Firearms Laws of the Fifty States* that provides annual ratings for the restrictiveness–permissiveness scale of U.S. gun laws for each state based on assessments of legal professionals who represent gun owners in legal cases. This publication gives a rating between 0 (completely restrictive) and 100 (completely permissive).

<sup>2</sup> *Stanford Mass Shootings in America* collected data on incidents with three or more shooting casualties in a public place, excluding incidents related to gang or narcotic involvement; this data source ceased data collection in early 2016. The Gun Violence Archive (GVA) is a publicly available data source that collects information on incidents that had four or more shooting casualties, but a search query can restrict information to four or more fatalities. Twenty-three incidents were added from Stanford, and 10 incidents were added from GVA.

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APPENDIX

TABLE A1 Mean annual mass shooting rate and fatality rate by state

State	All Fatal Mass Shootings			Domestic-Linked Mass Shootings			Non-Domestic-Linked Mass Shootings		
	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population
Alabama	.04	.21	.01	.09	.02	.08	.02	.06	.40
Alaska	.06	.40	.00	.00	.00	.13	.07	.33	.54
Arizona	.11	.53	.03	.13	.03	.19	.03	.31	.22
Arkansas	.13	.69	.02	.15	.05	.20	.00	.00	.20
California	.06	.32	.03	.13	.05	.11	.02	.02	.15
Colorado	.07	.39	.01	.05	.26	.06	.04	.03	.28
Connecticut	.06	.48	.02	.00	.08	.17	.06	.24	.00
Delaware	.00	.00	.02	.08	.10	.37	.09	.10	.09
Georgia	.06	.28	.03	.12	.03	.01	.02	.01	.07
Hawaii	.05	.25	.03	.10	.03	.05	.02	.02	.07
Idaho	.09	.40	.03	.12	.03	.06	.02	.02	.07
Illinois	.05	.22	.01	.03	.16	.05	.02	.02	.07
Indiana	.09	.40	.04	.16	.05	.09	.02	.02	.07
Iowa	.02	.10	.01	.05	.09	.09	.02	.02	.07
Louisiana	.11	.46	.02	.09	.09	.09	.02	.02	.07
Maine	.08	.30	.05	.20	.05	.10	.02	.02	.07
Maryland	.04	.17	.02	.09	.02	.09	.02	.02	.07
Massachusetts	.02	.09	.005	.02	.005	.07	.01	.01	.07

(Continues)

TABLE A1 (Continued)

State	All Fatal Mass Shootings				Domestic-Linked Mass Shootings				Non-Domestic-Linked Mass Shootings			
	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population
Michigan	.11	.46	.03	.14	.03	.07	.32	.08	.43	.28	.73	.12
Minnesota	.03	.15	.01	.02	.02	.02	.08	.07	.06	.05	.03	.08
Mississippi	.09	.43	.00	.00	.00	.07	.43	.06	.05	.03	.08	.08
Missouri	.08	.35	.02	.07	.02	.06	.28	.07	.06	.05	.03	.08
Nevada	.08	.86	.03	.13	.03	.05	.73	.03	.03	.03	.03	.08
New Hampshire	.03	.12	.00	.00	.00	.03	.12	.03	.03	.03	.03	.08
New Jersey	.03	.11	.01	.03	.01	.02	.08	.06	.06	.04	.21	.43
New Mexico	.12	.59	.06	.29	.06	.06	.30	.03	.10	.00	.00	.21
New York	.05	.24	.01	.03	.01	.04	.21	.03	.03	.03	.03	.08
North Carolina	.11	.46	.01	.03	.01	.10	.43	.03	.03	.03	.03	.08
North Dakota	.14	.54	.14	.54	.14	.00	.00	.03	.03	.03	.03	.08
Ohio	.07	.29	.02	.08	.02	.05	.21	.02	.05	.05	.05	.08
Oklahoma	.08	.42	.03	.16	.03	.04	.26	.04	.04	.04	.04	.08
Oregon	.06	.30	.04	.17	.04	.01	.03	.07	.07	.07	.07	.08
Pennsylvania	.04	.19	.02	.07	.02	.02	.12	.02	.02	.02	.02	.08
Rhode Island	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.08

(Continues)

TABLE A1 (Continued)

State	All Fatal Mass Shootings			Domestic-Linked Mass Shootings			Non-Domestic-Linked Mass Shootings		
	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population	Mean Annual Rate of Fatalities from Mass Shootings per 1 Million Population
South Carolina	.18	.88		.05		.20	.14		.68
South Dakota	.08	.34		.08		.34	.00		.00
Tennessee	.07	.29		.02		.07	.05		.20
Texas	.09	.47		.02		.11	.06		.34
Utah	.07	.40		.04		.19	.04		.21
Vermont	.10	.38		.00		.00	.10		.38
Virginia	.08	.48		.03		.13	.06		.35
Washington	.08	.38		.03		.12	.05		.26
West Virginia	.14	.64		.08		.34	.06		.30
Wisconsin	.04	.24		.01		.06	.03		.15
Wyoming	.12	.47		.12		.47	.00		.00
Overall	.07	.36		.03		.12	.04		.23

**TABLE A2** Estimates for incident rate ratios for all fatal mass shootings using gradual assault weapon and LCM ban variables

Variable	All Fatal Mass Shooting Incidents ( <i>n</i> = 604 shootings)		Fatalities in All Fatal Mass Shootings ( <i>n</i> = 2,976 fatalities)	
	IRR (IRR <sup>a</sup> )	95% CI (95% CI <sup>a</sup> )	IRR (IRR)	95% CI (95% CI)
Concealed carry permits—may issue as reference	.94	[.55, 1.59]	1.53	[.83, 2.84]
No issue	(.97)	(.58, 1.63)	(1.45)	(.78, 2.68)
Shall issue with discretion	.95	[.54, 1.69]	1.15	[.59, 2.22]
	(.88)	(.50, 1.55)	(1.08)	(.54, 2.18)
Strict shall issue	1.34	[.75, 2.39]	1.46	[.71, 2.98]
	(1.20)	(.72, 1.99)]	(1.36)	(.75, 2.47)
Permitless	1.35	[.52, 3.51]	1.02	[.31, 3.36]
	(1.24)	(.50, 3.03)	(.95)	(.30, 3.07)
Purchaser licensing <sup>b</sup>	<b>.46*</b>	[.27, .77]	<b>.44*</b>	[.24, .82]
	<b>(.50)</b>	(.34, .73)	<b>(.62)</b>	(.35, 1.07)
Comprehensive background check—point of sale	1.08	[.75, 1.55]	1.42	[.73, 2.79]
	(1.12)	(.78, 1.62)	(1.57)	(.72, 3.43)
DVRO firearm prohibition no dating partners	.83	[.40, 1.72]	.70	[.31, 1.62]
	(.94)	(.43, 2.04)	(.65)	(.30, 1.42)
DVRO firearm prohibition includes ex parte	1.08	[.74, 1.57]	1.10	[.69, 1.76]
	(1.04)	(.68, 1.57)	(.98)	(.59, 1.63)
DVRO firearm prohibition Includes dating partners	.93	[.58, 1.50]	.94	[.51, 1.70]
	(.89)	(.55, 1.42)	(.90)	(.50, 1.63)
DVRO firearm prohibition surrender provision	.75	[.48, 1.15]	.74	[.43, 1.25]
	(.77)	(.48, 1.25)	(.84)	(.48, 1.46)
Violent misdemeanor	1.50	[.82, 2.73]	1.30	[.67, 2.54]
	(1.48)	(.77, 2.84)	(1.30)	(.59, 2.87)
Federal assault weapon ban (gradual)	.95	[.70, 1.29]	1.02	[.65, 1.60]
	(.96)	(.70, 1.32)	(1.06)	(.70, 1.60)
State assault weapon ban (gradual)	.64	[.35, 1.18]	1.01	[.29, 3.47]
	(.66)	(.30, 1.48)	(.90)	(.21, 3.76)
Large-capacity magazine ban (gradual)	.74	[.42, 1.31]	.38	[.10, 1.44]
	<b>(.54)</b>	(.29, 1.00)	<b>(.40)</b>	(.10, 1.60)
Gun ownership	.98	[.95, 1.02]	.96	[.93, 1.00]
Unemployment	1.02	[.95, 1.10]	1.02	[.92, 1.13]
Percent in poverty	1.01	[.95, 1.07]	1.00	[.93, 1.07]
Percent male	.84	[.39, 1.78]	.85	[.37, 1.95]
Percent Black	1.07	[.91, 1.26]	1.19	[.96, 1.46]
Percent married	1.02	[.93, 1.13]	.99	[.88, 1.11]
Percent divorced	1.04	[.80, 1.33]	.99	[.74, 1.32]

(Continues)

TABLE A2 (Continued)

Variable	All Fatal Mass Shooting Incidents ( <i>n</i> = 604 shootings)		Fatalities in All Fatal Mass Shootings ( <i>n</i> = 2,976 fatalities)	
	IRR (IRR <sup>a</sup> )	95% CI (95% CI <sup>a</sup> )	IRR (IRR)	95% CI (95% CI)
Percent veteran	.87*	[.76, .99]	.94	[.79, 1.10]
Percent living in MSA	1.00	[.98, 1.03]	1.00	[.97, 1.03]
Ethanol consumption per capita	1.13	[.42, 3.02]	.82	[.26, 2.64]
Religious adherence	1.02	[.97, 1.06]	.99	[.93, 1.04]
Percent completed high school	1.06	[.98, 1.14]	1.06	[.98, 1.16]
Drug overdose rate (per 100,000)	1.01	[.97, 1.05]	.99	[.95, 1.03]
Percent aged 15–24	.84	[.69, 1.02]	.88	[.71, 1.09]
Linear time trend	.91	[.80, 1.04]	.90	[.77, 1.04]
Quadratic time trend	1.00	[1.00, 1.00]	1.00	[1.00, 1.00]

<sup>a</sup>Parsimonious model results.  
<sup>b</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.  
\**p* = .05.



**TABLE A3** Estimates for incident rate ratios for domestic-linked fatal mass shootings using gradual assault weapon and LCM ban variables

Variable	Domestic-Linked Fatal Mass Shooting incidents ( <i>n</i> = 182 shootings)		Fatalities in Domestic-Linked Mass Shootings ( <i>n</i> = 842 fatalities)	
	IRR (IRR <sup>a</sup> )	95% CI (95% CI <sup>a</sup> )	IRR (IRR)	95% CI (95% CI)
Concealed carry permit—may issue reference	.69	[.28, 1.74]	.80	[.29, 2.16]
No issue	(.67)	(.30, 1.51)	(.76)	(.31, 1.87)
Shall issue w/ discretion	1.02	[.42, 2.48]	.83	[.33, 2.07]
	(1.04)	(.46, 2.37)	(.89)	(.37, 2.14)
Strict shall issue	.94	[.35, 2.55]	.82	[.27, 2.55]
	(.96)	(.40, 2.28)	(.91)	(.33, 2.49)
Permitless	2.32	[.34, 15.75]	1.45	[.16, 13.37]
	(1.98)	(.33, 12.01)	(1.37)	(.16, 12.03)
Purchaser licensing <sup>b</sup>	.89	[.34, 2.37]	1.23	[.44, 3.42]
	(.80)	(.33, 1.93)	(1.53)	(.63, 3.77)
Comprehensive background checks—point of sale	1.79	[.89, 3.59]	<b>2.07*</b>	[1.03, 4.17]
	(1.77)	(.90, 3.48)	<b>(2.20)*</b>	(1.12, 4.32)
DVRO prohibition—final orders, dating partner excluded	.84	[.29, 2.45]	.66	[.21, 2.11]
	(.79)	(.33, 1.88)	(.49)	(.20, 1.22)
DVRO prohibition ex parte included	1.46	[.83, 2.58]	1.36	[.71, 2.61]
	(1.47)	(.85, 2.57)	(1.24)	(.63, 2.41)
DVRO includes dating partners	.93	[.59, 1.47]	.83	[.52, 1.33]
	(.89)	(.55, 1.45)	(.79)	(.46, 1.35)
DVRO surrender required	.82	[.42, 1.60]	.77	[.37, 1.60]
	(.85)	(.46, 1.58)	(.90)	(.45, 1.81)
Violent misdemeanor prohibition	1.61	[.45, 5.83]	1.87	[.57, 6.12]
	(1.89)	(.56, 6.37)	(2.15)	(.65, 7.14)
Federal assault weapons/LCM ban (gradual)	1.28	[.66, 2.48]	1.25	[.60, 2.59]
	(.93)	(.58, 1.51)	(.85)	(.49, 1.48)
State assault weapons ban (gradual)	.50	[.17, 1.43]	.62	[.19, 2.04]
	(.51)	(.19, 1.36)	(.68)	(.20, 2.33)
Large-capacity magazine ban (gradual)	.52	[.26, 1.02]	<b>.31*</b>	[.11, .86]
	<b>(.58)*</b>	(.36, .94)	(.37)	(.13, 1.11)
Gun ownership	.97	[.90, 1.02]	.97	[.89, 1.04]
Unemployment	1.05	[.91, 1.22]	1.10	[.93, 1.30]
Percent in poverty	1.01	[.89, 1.15]	1.00	[.88, 1.14]
Percent male	.96	[.27, 3.48]	1.01	[.22, 4.67]
Percent Black	1.02	[.82, 1.28]	1.06	[.83, 1.34]
Percent married	.91	[.77, 1.08]	.92	[.76, 1.11]

(Continues)

**TABLE A3** (Continued)

Variable	Domestic-Linked Fatal Mass Shooting incidents ( <i>n</i> = 182 shootings)		Fatalities in Domestic-Linked Mass Shootings ( <i>n</i> = 842 fatalities)	
	IRR (IRR <sup>a</sup> )	95% CI (95% CI <sup>a</sup> )	IRR (IRR)	95% CI (95% CI)
Percent divorced	.86	[.59, 1.27]	.88	[.56, 1.38]
Percent veteran	1.05	[.88, 1.24]	1.13	[.94, 1.36]
Percent living in MSA	1.00	[.95, 1.05]	.98	[.93, 1.03]
Ethanol consumption per capita	1.24	[.20, 7.88]	1.12	[.16, 7.90]
Religious adherence	1.02	[.94, 1.10]	1.00	[.93, 1.08]
Percent completed high school	1.01	[.91, 1.13]	.98	[.87, 1.10]
Drug overdose rate	.98	[.92, 1.04]	.97	[.91, 1.04]
Percent aged 15–24	1.00	[.74, 1.34]	1.01	[.75, 1.34]
Linear time trend	.97	[.77, 1.21]	1.00	[.79, 1.26]
Quadratic time trend	1.00	[1.00, 1.01]	1.00	[1.00, 1.01]

<sup>a</sup>Parsimonious model results.<sup>b</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.\**p* = .05.

**TABLE A4** Estimates for incident rate ratios for non-domestic-linked fatal mass shootings using gradual assault weapon And LCM ban variables

Variable	Non-Domestic-Linked Fatal Mass Shooting incidents ( <i>n</i> = 401 shootings)		Fatalities in Non-Domestic-Linked Mass Shootings ( <i>n</i> = 2,057 fatalities)	
	IRR (IRR <sup>a</sup> )	95% CI (95% CI <sup>a</sup> )	IRR (IRR)	95% CI (95% CI)
Concealed carry permit—may issue reference	1.01	[.50, 2.01]	1.78	[.84, 3.80]
No issue	(1.12)	(.55, 2.30)	(1.74)	(.82, 3.68)
Shall issue w/ discretion	.91	[.41, 2.02]	1.20	[.50, 2.89]
	(.81)	(.36, 1.83)	(1.00)	(.41, 2.43)
Strict shall issue	1.66	[.95, 2.92]	1.85	[.90, 3.83]
	(1.43)	(.87, 2.35)	(1.60)	(.88, 2.93)
Permitless	.75	[.28, 2.04]	1.12	[.25, 5.09]
	(.71)	(.27, 1.87)	(1.02)	(.22, 4.73)
Purchaser licensing <sup>b</sup>	<b>.42*</b>	[.22, .77]	<b>.38*</b>	[.20, .73]
	<b>(.43)*</b>	(.25, .72)	<b>(.48)*</b>	(.26, .91)
Comprehensive background checks—point of sale	.81	[.46, 1.45]	1.07	[.43, 2.68]
	(.86)	(.48, 1.54)	(1.27)	(.42, 3.87)
DVRO prohibition—final orders, dating partner excluded	.84	[.30, 2.39]	.71	[.23, 2.22]
	(1.07)	(.34, 3.37)	(.78)	(.24, 2.57)
DVRO prohibition ex parte included	1.01	[.53, 1.94]	1.16	[.59, 2.30]
	(.94)	(.43, 2.03)	(1.09)	(.50, 2.35)
DVRO includes dating partners	.94	[.47, 1.89]	.97	[.41, 2.29]
	(.86)	(.43, 1.72)	(.91)	(.40, 2.08)
DVRO surrender required	.75	[.35, 1.60]	.83	[.35, 1.98]
	(.78)	(.33, 1.86)	(.91)	(.37, 2.26)
Violent misdemeanor prohibition	1.35	[.69, 2.67]	1.02	[.50, 2.07]
	(1.18)	(.57, 2.46)	(.90)	(.38, 2.15)
Federal assault weapons/LCM ban (gradual)	.86	[.59, 1.27]	1.08	[.62, 1.87]
	(.95)	(.66, 1.38)	(1.15)	(.71, 1.86)
State assault weapons ban (gradual)	.58	[.25, 1.33]	.67	[.17, 2.70]
	(.69)	(.27, 1.78)	(.67)	(.15, 2.90)
Large-capacity magazine ban (gradual)	1.10	[.47, 2.56]	.67	[.16, 2.76]
	(.50)	(.23, 1.09)	(.44)	(.11, 1.75)
Gun ownership	1.00	[.96, 1.04]	.97	[.93, 1.02]
Unemployment	1.03	[.96, 1.10]	1.02	[.93, 1.11]
Percent in poverty	1.00	[.93, 1.07]	.98	[.91, 1.07]
Percent male	.74	[.29, 1.86]	.68	[.25, 1.83]
Percent Black	1.08	[.88, 1.32]	1.25	[.93, 1.69]
Percent married	1.07	[.92, 1.24]	.98	[.83, 1.15]

(Continues)

**TABLE A4** (Continued)

Variable	Non–Domestic-Linked Fatal Mass Shooting incidents ( <i>n</i> = 401 shootings)		Fatalities in Non–Domestic-Linked Mass Shootings ( <i>n</i> = 2,057 fatalities)	
	IRR (IRR <sup>a</sup> )	95% CI (95% CI <sup>a</sup> )	IRR (IRR)	95% CI (95% CI)
Percent divorced	1.13	[.79, 1.60]	.94	[.64, 1.38]
Percent veteran	.79*	[.66, .95]	.89	[.70, 1.12]
Percent living in MSA	1.02	[.98, 1.05]	1.01	[.97, 1.06]
Ethanol consumption per capita	1.09	[.25, 4.76]	.88	[.15, 5.13]
Religious adherence	1.02	[.96, 1.08]	.99	[.91, 1.07]
Percent completed high school	1.07	[.95, 1.19]	1.10	[.97, 1.24]
Drug overdose rate	1.04	[1.00, 1.08]	1.01	[.96, 1.06]
Percent aged 15–24	.78	[.56, 1.07]	.78	[.53, 1.15]
Linear time trend	.90	[.77, 1.05]	.88	[.73, 1.05]
Quadratic time trend	1.00	[1.00, 1.00]	1.00	[1.00, 1.01]

<sup>a</sup>Parsimonious model results.<sup>b</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.\**p* = .05.

**TABLE A5** Estimates for incident rate ratios for all fatal mass shootings (>3 victim fatalities), using year fixed effects

Variable	All Fatal Mass Shooting Incidents ( <i>n</i> = 604 shootings)		Fatalities in All Fatal Mass Shootings ( <i>n</i> = 2, 976 fatalities)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference	.88	[.52, 1.48]	1.31	[.74, 2.32]
No issue				
Shall issue w/ discretion	.83	[.47, 1.47]	.98	[.49, 1.95]
Strict shall issue	1.31	[.72, 2.39]	1.38	[.67, 2.84]
Permitless	1.21	[.49, 3.01]	.86	[.27, 2.73]
Purchaser licensing <sup>a</sup>	<b>.43*</b>	[.26, .70]	<b>.44*</b>	[.26, .75]
Comprehensive background checks—point of sale	1.00	[.69, 1.44]	1.16	[.63, 2.12]
DVRO prohibition—final orders, dating partner excluded	.94	[.46, 1.91]	.80	[.34, 1.85]
DVRO prohibition ex parte included	1.28	[.86, 1.90]	1.38	[.84, 2.25]
DVRO includes dating partners	.91	[.54, 1.51]	.92	[.48, 1.76]
DVRO surrender required	.69	[.45, 1.04]	.65	[.38, 1.10]
Violent misdemeanor prohibition	1.54	[.81, 2.95]	1.33	[.68, 2.59]
Federal assault weapons/LCM ban (gradual)	1.00	[1.00, 1.00]	1.00	[1.00, 1.00]
State assault weapons ban (gradual)	.60	[.27, 1.35]	.84	[.23, 3.08]
Large-capacity magazine ban (gradual)	.56	[.27, 1.16]	.37	[.11, 1.31]
Gun ownership	.97	[.93, 1.01]	.96	[.92, 1.01]
Unemployment	1.08	[.96, 1.22]	1.06	[.91, 1.25]
Percent in poverty	1.01	[.94, 1.07]	.99	[.92, 1.07]
Percent male	.75	[.38, 1.48]	.63	[.28, 1.43]
Percent Black	1.04	[.88, 1.24]	1.11	[.91, 1.35]
Percent married	1.10	[.98, 1.23]	1.02	[.88, 1.19]
Percent divorced	1.18	[.89, 1.56]	1.07	[.76, 1.51]
Percent veteran	<b>.69*</b>	[.55, .87]	<b>.64*</b>	[.48, .84]
Percent living in MSA	1.00	[.98, 1.03]	.99	[.97, 1.02]
Ethanol consumption per capita	1.05	[.39, 2.87]	.86	[.26, 2.81]
Religious adherence	1.01	[.97, 1.05]	.99	[.94, 1.04]
Percent completed high school	1.11	[.98, 1.25]	<b>1.17*</b>	[1.02, 1.34]
Drug overdose rate	1.00	[.97, 1.03]	.98	[.94, 1.02]
Percent aged 15–24	.92	[.73, 1.15]	.88	[.70, 1.10]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.

\**p* = .05.

**TABLE A6** Estimates for incident rate ratios for domestic-linked mass shooting (>3 victims), using year fixed effects

Variable	Domestic-Linked Fatal Mass Shooting Incidents ( <i>n</i> = 182 shootings)		Fatalities in Domestic-Linked Mass Shootings ( <i>n</i> = 842 fatalities)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference	.64	[.26, 1.59]	.62	[.24, 1.65]
No issue				
Shall issue w/ discretion	.90	[.35, 2.31]	.76	[.27, 2.09]
Strict shall issue	.85	[.31, 2.38]	.70	[.23, 2.11]
Permitless	1.92	[.30, 12.36]	1.06	[.12, 9.36]
Purchaser licensing <sup>a</sup>	.84	[.33, 2.16]	1.46	[.57, 3.71]
Comprehensive background checks—point of sale	1.89	[.86, 4.14]	<b>2.25*</b>	[1.02, 4.96]
DVRO prohibition—final orders, dating partner excluded	.94	[.34, 2.57]	.83	[.28, 2.49]
DVRO prohibition ex parte included	1.65	[.87, 3.16]	1.70	[.81, 3.57]
DVRO includes dating partners	.88	[.54, 1.45]	.83	[.50, 1.39]
DVRO surrender required	.84	[.41, 1.75]	.75	[.33, 1.70]
Violent misdemeanor prohibition	1.90	[.47, 7.77]	1.92	[.52, 7.06]
Federal assault weapons/LCM ban (gradual)	1.00	[1.00, 1.00]	1.00	[1.00, 1.00]
State assault weapons ban (gradual)	.39	[.11, 1.34]	.30	[.09, 1.02]
Large-capacity magazine ban (gradual)	<b>.39*</b>	[.20, .76]	<b>.26*</b>	[.11, .60]
Gun ownership	.96	[.89, 1.03]	.95	[.88, 1.02]
Unemployment	1.04	[.82, 1.31]	1.08	[.82, 1.41]
Percent in poverty	1.03	[.91, 1.18]	1.03	[.89, 1.18]
Percent male	1.04	[.29, 3.78]	1.05	[.22, 4.98]
Percent Black	1.00	[.78, 1.29]	1.03	[.78, 1.36]
Percent married	1.02	[.79, 1.30]	1.07	[.82, 1.40]
Percent divorced	1.10	[.65, 1.84]	1.18	[.69, 2.03]
Percent veteran	.97	[.63, 1.49]	1.04	[.64, 1.71]
Percent living in MSA	1.00	[.95, 1.06]	.98	[.93, 1.04]
Ethanol consumption per capita	.64	[.10, 4.05]	.59	[.08, 4.35]
Religious adherence	1.00	[.92, 1.07]	.98	[.90, 1.06]
Percent completed high school	.99	[.81, 1.22]	.94	[.75, 1.16]
Drug overdose rate	.97	[.92, 1.04]	.97	[.91, 1.03]
Percent aged 15–24	1.13	[.81, 1.56]	1.16	[.82, 1.63]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.\**p* = .05.

**TABLE A7** Estimates for incident rate ratios for non-domestic-linked mass shooting (>3 victims), using year fixed effects

Variable	Non-Domestic-Linked Fatal Mass Shooting incidents ( <i>n</i> = 182 shootings)		Fatalities in Non-Domestic-Linked Mass Shootings ( <i>n</i> = 2,057 fatalities)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference No issue	.92	[.46, 1.84]	1.40	[.70, 2.78]
Shall issue w/ discretion	.75	[.32, 1.74]	.98	[.38, 2.52]
Strict shall issue	1.58	[.86, 2.91]	1.68	[.82, 3.45]
Permitless	.66	[.27, 1.62]	.85	[.23, 3.13]
Purchaser licensing <sup>a</sup>	<b>.37*</b>	[.21, .67]	<b>.35*</b>	[.19, .65]
Comprehensive background checks—point of sale	.75	[.43, 1.31]	.83	[.38, 1.83]
DVRO prohibition—final orders, dating partner excluded	.92	[.34, 2.49]	.80	[.25, 2.52]
DVRO prohibition ex parte included	1.19	[.64, 2.22]	1.43	[.72, 2.84]
DVRO includes dating partners	.89	[.43, 1.84]	.91	[.37, 2.27]
DVRO surrender required	.66	[.34, 1.30]	.64	[.29, 1.44]
Violent misdemeanor prohibition	1.30	[.62, 2.72]	.93	[.44, 1.97]
Federal assault weapons/LCM ban (gradual)	1.00	[1.00, 1.00]	1.00	[1.00, 1.00]
State assault weapons ban (gradual)	.62	[.24, 1.61]	.81	[.21, 3.13]
Large-capacity magazine ban (gradual)	.74	[.28, 1.97]	.58	[.15, 2.32]
Gun ownership	.98	[.94, 1.03]	.97	[.92, 1.03]
Unemployment	1.12	[.99, 1.27]	1.11	[.96, 1.28]
Percent in poverty	.99	[.91, 1.08]	.96	[.88, 1.06]
Percent male	.66	[.31, 1.41]	<b>.40*</b>	[.17, .95]
Percent Black	1.04	[.84, 1.29]	1.15	[.88, 1.50]
Percent married	<b>1.22*</b>	[1.00, 1.48]	1.08	[.86, 1.36]
Percent divorced	1.26	[.86, 1.87]	1.01	[.64, 1.58]
Percent veteran	<b>.58*</b>	[.43, .79]	<b>.52*</b>	[.35, .76]
Percent living in MSA	1.01	[.98, 1.05]	1.01	[.97, 1.05]
Ethanol consumption per capita	1.09	[.26, 4.47]	.98	[.19, 5.03]
Religious adherence	1.02	[.96, 1.08]	1.00	[.92, 1.08]
Percent completed high school	1.16	[.98, 1.36]	<b>1.27*</b>	[1.05, 1.53]
Drug overdose rate	1.02	[.98, 1.06]	1.00	[.96, 1.05]
Percent aged 15–24	.88	[.59, 1.33]	.76	[.48, 1.21]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.

\**p* = .05.

Estimates Using Poisson Fixed-Effects Regression.

**TABLE A8** Estimates for incident rate ratios for all fatal mass shootings (>3 victims), using fixed-effects poisson regression

Variable	All Fatal Mass Shooting Incidents ( <i>n</i> = 604 shootings)		Fatalities in All Fatal Mass Shootings ( <i>n</i> = 2, 976 fatalities)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference	.79	[.49, 1.28]	1.07	[.61, 1.85]
No issue				
Shall issue w/ discretion	.81	[.46, 1.40]	.90	[.47, 1.75]
Strict shall issue	1.11	[.67, 1.83]	1.06	[.61, 1.83]
Permitless	1.22	[.53, 2.76]	.97	[.39, 2.39]
Purchaser licensing <sup>a</sup>	<b>.49*</b>	[.30, .82]	.61	[.37, 1.01]
Comprehensive background checks—point of sale	1.11	[.79, 1.55]	1.83	[.68, 4.87]
DVRO prohibition—final orders, dating partner excluded	.93	[.44, 1.97]	.79	[.33, 1.88]
DVRO prohibition ex parte included	1.00	[.72, 1.38]	.84	[.57, 1.24]
DVRO includes dating partners	.86	[.58, 1.28]	.85	[.55, 1.32]
DVRO surrender required	.76	[.52, 1.11]	.88	[.53, 1.46]
Violent misdemeanor prohibition	1.42	[.78, 2.59]	.97	[.45, 2.07]
Federal assault weapons/LCM ban (gradual)	.92	[.70, 1.20]	.91	[.67, 1.24]
State assault weapons ban (gradual)	.74	[.45, 1.24]	.93	[.57, 1.52]
Large-capacity magazine ban (gradual)	<b>.48*</b>	[.28, .82]	<b>.32*</b>	[.17, .58]
Gun ownership	.99	[.96, 1.02]	.98	[.95, 1.01]
Unemployment	1.04	[.98, 1.10]	1.03	[.95, 1.11]
Percent in poverty	1.00	[.94, 1.05]	.98	[.93, 1.04]
Percent male	.62	[.29, 1.31]	<b>.43*</b>	[.19, .94]
Percent Black	1.03	[.88, 1.21]	1.12	[.88, 1.43]
Percent married	1.04	[.95, 1.14]	1.01	[.93, 1.10]
Percent divorced	1.01	[.80, 1.28]	1.01	[.76, 1.33]
Percent veteran	<b>.84*</b>	[.74, .96]	.95	[.80, 1.13]
Percent living in MSA	1.00	[.98, 1.03]	.99	[.97, 1.02]
Ethanol consumption per capita	1.37	[.49, 3.81]	1.06	[.33, 3.37]
Religious adherence	1.02	[.98, 1.07]	1.00	[.94, 1.06]
Percent completed high school	1.06	[.98, 1.13]	1.07	[.99, 1.16]
Drug overdose rate	1.02	[.99, 1.05]	1.01	[.98, 1.04]
Percent aged 15–24	.86	[.70, 1.05]	.95	[.76, 1.18]
Linear time trend	.96	[.84, 1.09]	.96	[.84, 1.10]
Quadratic time trend	1.00	[1.00, 1.00]	1.00	[1.00, 1.00]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.

\**p* = .05.



**TABLE A9** Estimates for incident rate ratios for domestic-linked mass shooting (>3 victims), using fixed-effects poisson regression

Variable	Domestic-Linked Fatal Mass Shooting incidents ( <i>n</i> = 182 shootings)		Fatalities in Domestic-Linked Mass Shootings ( <i>n</i> = 842 fatalities)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference	.64	[.26, 1.58]	.73	[.29, 1.83]
No issue				
Shall issue w/ discretion	1.00	[.43, 2.32]	.85	[.37, 1.95]
Strict shall issue	.98	[.38, 2.49]	.93	[.34, 2.52]
Permitless	2.94	[.51, 16.83]	2.56	[.42, 15.60]
Purchaser licensing <sup>a</sup>	.95	[.40, 2.22]	1.90	[.72, 4.98]
Comprehensive background checks—point of sale	1.79	[.90, 3.58]	<b>1.92*</b>	[1.05, 3.53]
DVRO prohibition—final orders, dating partner excluded	1.01	[.35, 2.89]	.87	[.29, 2.64]
DVRO prohibition ex parte included	1.59	[.88, 2.85]	1.51	[.81, 2.81]
DVRO includes dating partners	.90	[.57, 1.43]	.80	[.50, 1.28]
DVRO surrender required	.86	[.46, 1.61]	.84	[.45, 1.56]
Violent misdemeanor prohibition	1.60	[.44, 5.79]	1.66	[.55, 5.05]
Federal assault weapons/LCM ban (gradual)	.87	[.50, 1.50]	.89	[.51, 1.53]
State assault weapons ban (gradual)	.53	[.23, 1.20]	.68	[.32, 1.43]
Large-capacity magazine ban (gradual)	<b>.38*</b>	[.21, .70]	<b>.27*</b>	[.12, .59]
Gun ownership	.98	[.91, 1.05]	.97	[.91, 1.04]
Unemployment	1.04	[.91, 1.19]	1.09	[.94, 1.25]
Percent in poverty	1.00	[.88, 1.14]	.99	[.88, 1.12]
Percent male	.87	[.26, 2.89]	.75	[.21, 2.66]
Percent Black	1.02	[.82, 1.27]	1.06	[.85, 1.33]
Percent married	.96	[.83, 1.12]	.96	[.83, 1.11]
Percent divorced	.90	[.64, 1.27]	.95	[.68, 1.34]
Percent veteran	.99	[.82, 1.20]	1.03	[.85, 1.27]
Percent living in MSA	1.00	[.95, 1.06]	.99	[.94, 1.04]
Ethanol consumption per capita	1.10	[.16, 7.46]	1.07	[.13, 8.41]
Religious adherence	1.03	[.94, 1.12]	1.01	[.92, 1.11]
Percent completed high school	1.02	[.92, 1.14]	1.01	[.91, 1.13]
Drug overdose rate	.99	[.93, 1.05]	.98	[.92, 1.04]
Percent aged 15–24	1.07	[.79, 1.47]	1.17	[.83, 1.64]
Linear time trend	1.01	[.80, 1.27]	1.04	[.83, 1.30]
Quadratic time trend	1.00	[.99, 1.01]	1.00	[.99, 1.01]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.

\**p* = .05.

**TABLE A10** Estimates for incident rate ratios for non-domestic-linked mass shooting (>3 victims), using fixed-effects poisson regression

Variable	Non-Domestic-Linked Fatal Mass Shooting incidents (n = 182 shootings)		Fatalities in Non-Domestic-Linked Mass Shootings (n = 2,057 fatalities)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference	.88	[.46, 1.70]	1.21	[.62, 2.36]
No issue				
Shall issue w/ discretion	.76	[.34, 1.71]	.92	[.38, 2.22]
Strict shall issue	1.28	[.76, 2.18]	1.20	[.66, 2.15]
Permitless	.58	[.24, 1.42]	.75	[.19, 2.92]
Purchaser licensing <sup>a</sup>	<b>.42*</b>	[.22, .80]	<b>.45*</b>	[.25, .83]
Comprehensive background checks—point of sale	.87	[.50, 1.51]	1.84	[.49, 6.87]
DVRO prohibition—final orders, dating partner excluded	.91	[.35, 2.38]	.75	[.25, 2.27]
DVRO prohibition ex parte included	.83	[.46, 1.50]	.68	[.38, 1.22]
DVRO includes dating partners	.84	[.46, 1.53]	.85	[.45, 1.62]
DVRO surrender required	.76	[.39, 1.49]	.99	[.45, 2.20]
Violent misdemeanor prohibition	1.22	[.60, 2.50]	.69	[.28, 1.72]
Federal assault weapons/LCM ban (gradual)	.96	[.65, 1.41]	.95	[.62, 1.45]
State assault weapons ban (gradual)	.79	[.42, 1.48]	.94	[.50, 1.76]
Large-capacity magazine ban (gradual)	.56	[.26, 1.19]	<b>.35*</b>	[.16, .76]
Gun ownership	1.01	[.97, 1.04]	.99	[.96, 1.03]
Unemployment	1.04	[.97, 1.11]	1.01	[.92, 1.11]
Percent in poverty	1.00	[.93, 1.07]	.98	[.92, 1.05]
Percent male	.52	[.19, 1.38]	<b>.40*</b>	[.16, 1.00]
Percent Black	1.02	[.83, 1.25]	1.13	[.81, 1.58]
Percent married	1.08	[.95, 1.23]	1.03	[.90, 1.18]
Percent divorced	1.10	[.79, 1.53]	.99	[.67, 1.46]
Percent veteran	<b>.77*</b>	[.64, .94]	.95	[.75, 1.18]
Percent living in MSA	1.01	[.98, 1.05]	1.01	[.97, 1.05]
Ethanol consumption per capita	1.32	[.30, 5.94]	1.00	[.21, 4.87]
Religious adherence	1.01	[.96, 1.08]	.99	[.92, 1.07]
Percent completed high school	1.05	[.94, 1.18]	1.09	[.97, 1.22]
Drug overdose rate	<b>1.04*</b>	[1.01, 1.08]	1.01	[.98, 1.05]
Percent aged 15–24	.78	[.58, 1.04]	.85	[.61, 1.17]
Linear time trend	.94	[.81, 1.09]	.94	[.80, 1.10]
Quadratic time trend	1.00	[1.00, 1.00]	1.00	[1.00, 1.01]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.

\*p = .05.

Estimates Omitting Major Mass Shooting Incidents From 2012 in Colorado (Aurora) and Connecticut (Newtown).

**TABLE A11** Estimates for incident rate ratios for all fatal mass shootings (>3 victims), Omitting Newtown and Aurora shootings

Variable	All Fatal Mass Shooting Incidents ( <i>n</i> = 602 shootings)		Fatalities in All Fatal Mass Shootings ( <i>n</i> = 2, 937 fatalities)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference	.93	[.55, 1.57]	1.50	[.81, 2.75]
No issue				
Shall issue w/ discretion	.89	[.50, 1.60]	1.10	[.54, 2.24]
Strict shall issue	1.30	[.73, 2.30]	1.52	[.76, 3.06]
Permitless	1.31	[.51, 3.34]	1.09	[.34, 3.50]
Purchaser licensing <sup>a</sup>	<b>.40*</b>	[.23, .69]	<b>.33*</b>	[.19, .59]
Comprehensive background checks—point of sale	1.11	[.78, 1.59]	1.41	[.73, 2.74]
DVRO prohibition—final orders, dating partner excluded	.89	[.43, 1.85]	.77	[.34, 1.77]
DVRO prohibition ex parte included	1.13	[.77, 1.64]	1.21	[.75, 1.94]
DVRO includes dating partners	.90	[.57, 1.45]	.93	[.51, 1.70]
DVRO surrender required	.76	[.49, 1.17]	.76	[.45, 1.30]
Violent misdemeanor prohibition	1.51	[.78, 2.91]	1.27	[.63, 2.59]
Federal assault weapons/LCM ban (gradual)	.92	[.68, 1.26]	.96	[.63, 1.44]
State assault weapons ban (gradual)	.67	[.33, 1.38]	.90	[.30, 2.74]
Large-capacity magazine ban (gradual)	.56	[.30, 1.03]	.40	[.14, 1.14]
Gun ownership	.98	[.95, 1.02]	.96	[.93, 1.00]
Unemployment	1.02	[.95, 1.10]	1.01	[.91, 1.11]
Percent in poverty	1.01	[.95, 1.07]	1.00	[.93, 1.07]
Percent male	.82	[.39, 1.75]	.90	[.39, 2.08]
Percent Black	1.07	[.91, 1.25]	1.17	[.96, 1.43]
Percent married	1.03	[.94, 1.13]	.99	[.89, 1.11]
Percent divorced	1.02	[.79, 1.31]	.96	[.72, 1.28]
Percent veteran	<b>.86*</b>	[.75, .98]	.91	[.78, 1.07]
Percent living in MSA	1.01	[.98, 1.03]	1.01	[.98, 1.03]
Ethanol consumption per capita	1.08	[.39, 2.97]	.79	[.23, 2.66]
Religious adherence	1.01	[.97, 1.06]	.99	[.94, 1.05]
Percent completed high school	1.06	[.98, 1.14]	1.07	[.99, 1.17]
Drug overdose rate	1.01	[.97, 1.05]	.99	[.95, 1.03]
Percent aged 15–24	.83	[.68, 1.02]	.86	[.69, 1.08]
Linear time trend	.92	[.81, 1.05]	.89	[.77, 1.03]
Quadratic time trend	1.00	[1.00, 1.00]	1.00	[1.00, 1.00]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.

\**p* = .05.

**TABLE A12** Estimates for incident rate ratios for domestic-linked mass shooting (>3 victims), Omitting Newtown and Aurora shootings

Variable	Domestic-Linked Fatal Mass Shooting Incidents ( <i>n</i> = 181 shootings) Law Variables + Covariates		Fatalities in Domestic-Linked Mass Shootings ( <i>n</i> = 815 fatalities) Law Variables + Covariates	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference No issue	.67	[.26, 1.70]	.75	[.28, 2.02]
Shall issue w/ discretion	.99	[.42, 2.35]	.84	[.34, 2.04]
Strict shall issue	.97	[.36, 2.66]	.93	[.30, 2.86]
Permitless	2.49	[.37, 16.69]	1.72	[.19, 15.52]
Purchaser licensing <sup>a</sup>	.60	[.16, 2.20]	.60	[.14, 2.53]
Comprehensive background checks—point of sale	1.90	[.91, 4.00]	<b>2.17*</b>	[1.05, 4.48]
DVRO prohibition—final orders, dating partner excluded	.91	[.32, 2.60]	.71	[.23, 2.20]
DVRO prohibition ex parte included	1.60	[.89, 2.87]	1.66	[.87, 3.17]
DVRO includes dating partners	.92	[.58, 1.47]	.83	[.51, 1.36]
DVRO surrender required	.84	[.44, 1.62]	.78	[.38, 1.62]
Violent misdemeanor prohibition	1.76	[.42, 7.41]	1.81	[.51, 6.47]
Federal assault weapons/LCM ban (gradual)	.87	[.50, 1.52]	.85	[.46, 1.57]
State assault weapons ban (gradual)	.34	[.10, 1.14]	<b>.24*</b>	[.06, .90]
Large-capacity magazine ban (gradual)	<b>.46*</b>	[.23, .89]	<b>.45*</b>	[.22, .91]
Gun ownership	.97	[.90, 1.05]	.97	[.90, 1.05]
Unemployment	1.05	[.90, 1.21]	1.08	[.91, 1.28]
Percent in poverty	1.01	[.88, 1.15]	1.00	[.87, 1.14]
Percent male	1.09	[.31, 3.90]	1.27	[.29, 5.52]
Percent Black	1.00	[.80, 1.25]	1.01	[.80, 1.27]
Percent married	.96	[.82, 1.13]	.97	[.81, 1.16]
Percent divorced	.86	[.59, 1.27]	.82	[.52, 1.27]
Percent veteran	1.00	[.83, 1.21]	1.06	[.87, 1.30]
Percent living in MSA	1.00	[.95, 1.06]	.99	[.94, 1.05]
Ethanol consumption per capita	.93	[.14, 6.29]	.83	[.11, 6.07]
Religious adherence	1.02	[.94, 1.11]	1.01	[.94, 1.10]
Percent completed high school	1.02	[.91, 1.15]	1.01	[.89, 1.13]
Drug overdose rate	.98	[.92, 1.04]	.98	[.91, 1.05]
Percent aged 15–24	1.00	[.75, 1.33]	.99	[.75, 1.30]
Linear time trend	.98	[.79, 1.23]	1.02	[.81, 1.28]
Quadratic time trend	1.00	[.99, 1.01]	1.00	[1.00, 1.01]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.\**p* = .05.

**TABLE A13** Estimates for incident rate ratios for non-domestic-linked mass shooting (>3 victims), Omitting Newtown and Aurora shootings

Variable	Non-Domestic-Linked Fatal Mass Shooting incidents (n = 181 shootings)		Fatalities in Non-Domestic-Linked Mass Shootings (n = 2,045 fatalities)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference	1.00	[.49, 2.03]	1.72	[.79, 3.75]
No issue				
Shall issue w/ discretion	.81	[.36, 1.82]	1.06	[.42, 2.68]
Strict shall issue	1.51	[.85, 2.69]	1.79	[.86, 3.72]
Permitless	.67	[.25, 1.78]	1.08	[.24, 4.76]
Purchaser licensing <sup>a</sup>	<b>.38*</b>	[.20, .70]	<b>.34*</b>	[.18, .62]
Comprehensive background checks—point of sale	.85	[.48, 1.51]	1.11	[.45, 2.74]
DVRO prohibition—final orders, dating partner excluded	.90	[.33, 2.52]	.75	[.25, 2.22]
DVRO prohibition ex parte included	1.04	[.54, 2.01]	1.20	[.60, 2.39]
DVRO includes dating partners	.90	[.45, 1.81]	.98	[.43, 2.26]
DVRO surrender required	.75	[.35, 1.61]	.84	[.35, 2.00]
Violent misdemeanor prohibition	1.33	[.65, 2.74]	.99	[.48, 2.06]
Federal assault weapons/LCM ban (gradual)	.98	[.65, 1.47]	1.09	[.66, 1.80]
State assault weapons ban (gradual)	.72	[.31, 1.69]	.94	[.24, 3.75]
Large-capacity magazine ban (gradual)	.67	[.27, 1.69]	.47	[.12, 1.94]
Gun ownership	1.00	[.96, 1.04]	.97	[.92, 1.02]
Unemployment	1.03	[.96, 1.11]	1.01	[.92, 1.11]
Percent in poverty	1.00	[.94, 1.07]	.98	[.91, 1.07]
Percent male	.68	[.27, 1.73]	.69	[.25, 1.93]
Percent Black	1.08	[.87, 1.33]	1.27	[.94, 1.72]
Percent married	1.06	[.92, 1.21]	.98	[.84, 1.14]
Percent divorced	1.10	[.77, 1.57]	.94	[.64, 1.37]
Percent veteran	<b>.79*</b>	[.65, .96]	.88	[.69, 1.11]
Percent living in MSA	1.01	[.98, 1.05]	1.02	[.97, 1.06]
Ethanol consumption per capita	1.13	[.24, 5.21]	.86	[.13, 5.51]
Religious adherence	1.01	[.95, 1.08]	.99	[.91, 1.07]
Percent completed high school	1.06	[.95, 1.19]	1.11	[.97, 1.26]
Drug overdose rate	1.04	[1.00, 1.08]	1.01	[.96, 1.06]
Percent aged 15–24	.78	[.57, 1.07]	.80	[.54, 1.18]
Linear time trend	.91	[.77, 1.07]	.86	[.72, 1.04]
Quadratic time trend	1.00	[1.00, 1.00]	1.00	[1.00, 1.01]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.

\*p = .05.

Estimates Using Different Definitions of “Mass Shooting”—Shootings With Fatalities > 4 and Shootings With Fatalities > 5.

**TABLE A14** Estimates for incident rate ratios for all mass shooting (>4 victims)

Variable	All Fatal Mass Shooting Incidents ( <i>n</i> = 198 shootings)		Fatalities in All Fatal Mass Shootings ( <i>n</i> = 1,352 fatalities)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference No issue	<b>4.14*</b>	[1.57, 1.87]	<b>8.41*</b>	[3.00, 23.57]
Shall issue w/ discretion	.96	[.31, 2.94]	1.23	[.35, 4.30]
Strict shall issue	2.24	[.91, 5.49]	2.60	[.99, 6.78]
Permitless	.91	[.14, 5.78]	1.53	[.19, 12.43]
Purchaser licensing <sup>a</sup>	.52	[.15, 1.83]	.44	[.09, 2.18]
Comprehensive background checks—point of sale	1.94	[.85, 4.41]	3.65	[.74, 18.05]
DVRO prohibition—final orders, dating partner excluded	.70	[.22, 2.21]	.63	[.15, 2.61]
DVRO prohibition ex parte included	.97	[.54, 1.73]	1.11	[.55, 2.26]
DVRO includes dating partners	.58	[.30, 1.13]	.61	[.24, 1.52]
DVRO surrender required	.75	[.40, 1.42]	.79	[.32, 1.95]
Violent misdemeanor prohibition	2.10	[.55, 8.02]	1.34	[.35, 5.05]
Federal assault weapons/LCM ban (gradual)	1.00	[.50, 2.02]	.92	[.42, 2.01]
State assault weapons ban (gradual)	.58	[.13, 2.62]	1.41	[.09, 2.94]
Large-capacity magazine ban (gradual)	<b>.20*</b>	[.06, .65]	<b>.08*</b>	[.01, .92]
Gun ownership	.97	[.91, 1.02]	.94	[.88, 1.00]
Unemployment	1.08	[.97, 1.21]	1.08	[.95, 1.24]
Percent in poverty	.95	[.85, 1.06]	.93	[.81, 1.06]
Percent male	.43	[.12, 1.59]	.39	[.08, 1.94]
Percent Black	.92	[.66, 1.28]	1.05	[.68, 1.61]
Percent married	.90	[.80, 1.01]	.88	[.75, 1.04]
Percent divorced	.81	[.55, 1.19]	.83	[.53, 1.29]
Percent veteran	.88	[.69, 1.12]	.94	[.70, 1.26]
Percent living in MSA	.98	[.94, 1.02]	.97	[.92, 1.02]
Ethanol consumption per capita	.86	[.13, 5.73]	.90	[.09, 9.22]
Religious adherence	.93	[.86, 1.00]	<b>.90*</b>	[.82, 1.00]
Percent completed high school	<b>1.17*</b>	[1.05, 1.30]	<b>1.19*</b>	[1.05, 1.34]
Drug overdose rate	1.02	[.96, 1.07]	.99	[.94, 1.04]
Percent aged 15–24	1.14	[.84, 1.55]	1.13	[.77, 1.65]
Linear time trend	.96	[.77, 1.20]	.93	[.73, 1.19]
Quadratic time trend	1.00	[.99, 1.00]	1.00	[1.00, 1.01]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.\**p* = .05.

**TABLE A15** Estimates for incident rate ratios for all mass shooting (>5 victims)

Variable	All Fatal Mass Shooting Incidents (>5 victims) ( <i>n</i> = 92 shootings)		Fatalities in All Fatal Mass Shootings ( <i>n</i> = 822 fatalities)	
	IRR	95% CI	IRR	95% CI
Concealed carry permit—may issue reference	<b>1.77*</b>	[1.99, 58.31]	<b>25.74*</b>	[4.03, 164.2]
No issue				
Shall issue w/ discretion	2.13	[.27, 16.58]	1.95	[.17, 21.93]
Strict shall issue	1.93	[.30, 12.41]	1.79	[.22, 14.29]
Permitless	3.81	[.34, 42.94]	2.99	[.22, 41.29]
Purchaser licensing <sup>a</sup>	.87	[.32, 2.33]	.69	[.24, 2.05]
Comprehensive background checks—point of sale	2.27	[.52, 9.84]	6.98	[.82, 59.36]
DVRO prohibition—final orders, dating partner excluded	.61	[.11, 3.35]	.36	[.05, 2.62]
DVRO prohibition ex parte included	1.16	[.48, 2.79]	1.07	[.41, 2.83]
DVRO includes dating partners	.98	[.27, 3.58]	.94	[.21, 4.24]
DVRO surrender required	.51	[.15, 1.76]	.88	[.19, 4.02]
Violent misdemeanor prohibition	.72	[.16, 3.26]	.27	[.04, 1.65]
Federal assault weapons/LCM ban (gradual)	.77	[.31, 1.96]	.69	[.21, 2.22]
State assault weapons ban (gradual)	1.04	[.17, 6.36]	1.38	[.12, 15.48]
Large-capacity magazine ban (gradual)	<b>.14*</b>	[.03, .70]	<b>.05*</b>	[.00, .51]
Gun ownership	.96	[.89, 1.04]	.92	[.84, 1.01]
Unemployment	1.16	[.98, 1.37]	1.17	[.95, 1.45]
Percent in poverty	.93	[.80, 1.10]	.88	[.72, 1.07]
Percent male	.26	[.03, 2.14]	.42	[.04, 4.62]
Percent Black	.82	[.52, 1.30]	.91	[.53, 1.57]
Percent married	1.05	[.86, 1.28]	1.03	[.79, 1.33]
Percent divorced	1.03	[.56, 1.91]	1.06	[.54, 2.08]
Percent veteran	.86	[.64, 1.18]	.92	[.63, 1.34]
Percent living in MSA	.96	[.88, 1.05]	.94	[.84, 1.04]
Ethanol consumption per capita	5.43	[.23, 126.96]	1.79	[.04, 77.79]
Religious adherence	.91	[.80, 1.03]	.88	[.75, 1.03]
Percent completed high school	1.16	[.97, 1.39]	1.19	[.97, 1.47]
Drug overdose rate	.98	[.89, 1.08]	.95	[.86, 1.05]
Percent aged 15–24	1.16	[.66, 2.04]	1.20	[.59, 2.45]
Linear time trend	1.10	[.83, 1.44]	.99	[.74, 1.33]
Quadratic time trend	1.00	[.99, 1.01]	1.00	[.99, 1.01]

<sup>a</sup>Handgun purchaser licensing with in-person application and/or fingerprinting of applicant.

\**p* = .05.

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## **Declaration Exhibit 3**



# Purchaser Licensing, Point-of-Sale Background Check Laws, and Firearm Homicide and Suicide in 4 US States, 1985–2017

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**Objectives.** To estimate and compare the effects of state background check policies on firearm-related mortality in 4 US states.

**Methods.** Annual data from 1985 to 2017 were used to examine Maryland and Pennsylvania, which implemented point-of-sale comprehensive background check (CBC) laws for handgun purchasers; Connecticut, which adopted a handgun purchaser licensing law; and Missouri, which repealed a similar law. Using synthetic control methods, we estimated the effects of these laws on homicide and suicide rates stratified by firearm involvement.

**Results.** There was no consistent relationship between CBC laws and mortality rates. There were estimated decreases in firearm homicide (27.8%) and firearm suicide (23.2%–40.5%) rates associated with Connecticut's law. There were estimated increases in firearm homicide (47.3%), nonfirearm homicide (18.1%), and firearm suicide (23.5%) rates associated with Missouri's repeal.

**Conclusions.** Purchaser licensing laws coupled with CBC requirements were consistently associated with lower firearm homicide and suicide rates, but CBC laws alone were not.

**Public Health Implications.** Our results contribute to a body of research showing that CBC laws are not associated with reductions in firearm-related deaths unless they are coupled with handgun purchaser licensing laws. (*Am J Public Health.* 2020;110:1546–1552. doi:10.2105/AJPH.2020.305822)

Firearms were the second-leading mechanism of death by injury in the United States in 2018, resulting in 39 740 deaths.<sup>1</sup> Laws intended to keep firearms from individuals at the highest risk of harming themselves or others may reduce firearm-related deaths, but they rely on background checks and other systems for vetting those seeking to acquire firearms.

Although federal law requires individuals who purchase firearms from federally licensed dealers to pass a background check, no background check is required for purchases from private sellers. As of January 2020, 21 states required a background check for at least some private firearm sales. These state laws can be sorted into 2 broad categories: point-of-sale comprehensive background check

(CBC) laws and purchaser licensing laws. Both categories require firearm purchasers to pass a background check prior to a sale or transfer, but they differ with respect to timing and process.

CBC laws require a background check for private purchasers at the point of sale. Prospective purchasers and sellers typically go to federally licensed dealers who process the transfer by submitting applications to the

Federal Bureau of Investigation or state law enforcement agencies to determine whether the applicant is legally qualified to acquire a firearm. Under purchaser licensing laws, a prospective purchaser is required to apply for a license directly to a state or local law enforcement agency that vets the application and initiates a background check, often aided by mandated fingerprinting. Private sellers and federally licensed dealers can sell handguns only to individuals with valid licenses. Absent a CBC law, residents of states with a licensing law may not need to undergo a point-of-sale background check if they have a valid license to purchase. In some states, a valid permit to carry a concealed handgun can substitute for a license to purchase or a point-of-sale background check.

Although individual-level studies of background checks suggest that they are effective,<sup>2–4</sup> recent state-level research casts doubt on the population-level effectiveness of CBC laws alone in reducing firearm-related deaths.<sup>5–7</sup> Studies suggesting CBC law effectiveness have methodological limitations including cross-sectional designs<sup>8</sup> and exclusion of CBC laws that apply only to handguns.<sup>9</sup> In 2018, handguns accounted for 90% of the firearms used in homicides in which the type of firearm was specified.<sup>10</sup>

Studies in several US states have shown that firearm purchaser licensing laws are

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associated with reductions in firearm homicides.<sup>3,8</sup> Connecticut enacted a handgun purchaser licensing law in 1995 that was associated with significant decreases in rates of firearm homicides<sup>11</sup> and firearm suicides.<sup>12</sup> After the 2007 repeal of Missouri's handgun purchaser licensing law that also functioned as a point-of-sale CBC law, rates of firearm homicides<sup>13,14</sup> and suicides<sup>12</sup> increased in the state, as did indicators of guns diverted for criminal use.<sup>15</sup> Critics of these studies identified the relatively short periods of postlaw data in Missouri and Connecticut and possible overreliance on Rhode Island as a point of comparison with Connecticut's trends.<sup>16</sup>

In this study, we improved on prior analyses of purchaser licensing laws in Connecticut and Missouri and applied similar methods to analyze point-of-sale-only laws in Maryland and Pennsylvania, which adopted typical CBC laws in 1996 and 1995, respectively. We lengthened the period of observation for Connecticut and Missouri and applied a uniform analytic approach across all 4 states, comparing the findings with respect to CBC and licensing policies.

## METHODS

Following the example of some earlier studies of licensing and CBC laws,<sup>6,7,11,13</sup> we used the synthetic control method<sup>17</sup> to compare each state's homicide and suicide rates with estimates of the counterfactual: each intervention state's forecasted homicide and suicide rates had the law not been enacted. In accord with the synthetic control method, we used a series of preintervention outcomes and other covariates to construct a convex combination of weighted donor states that best approximated the pretreatment outcome and covariate trends in the treated state (the state with the relevant policy change). The weights were determined on the basis of their capability to minimize the prediction error during the period prior to the law change being evaluated. The donor pool of potential controls contained states that did not have the law of interest in place during the study period. This weighted combination of donor states—the synthetic control—was compared with the treated state in the posttreatment period to estimate the effect of the intervention. We present the mean square predicted error

(MSPE) for the preintervention period as a measure of model fit.

Each state law change was evaluated for its association with rates of firearm homicides, nonfirearm homicides, firearm suicides, and nonfirearm suicides. Each prelaw period was 10 years; the postlaw period was determined by the amount of postlaw data available after the law change and the legal environment of each state. The time period for Pennsylvania's 1995 CBC law ran from 1985 to 2017. For Maryland's 1996 CBC law, the postlaw period was truncated at 2013 because the state adopted a handgun purchaser licensing law late that year. The study period for Missouri's repeal of its 2007 licensing law started in 1997 and ended in 2016 because Missouri began allowing permitless concealed carry on January 1, 2017. Prior work has shown an association between less restrictive concealed carry laws and violent crime.<sup>18</sup> For Connecticut, we present data through 2017 but also provide estimates that exclude 2013 to 2017 because of a state program under which several cities began implementing focused deterrence programs to curb gang violence.<sup>19</sup>

The donor pools of potential controls for Pennsylvania (29 states), Maryland (33 states), and Connecticut (39 states) consisted of states that did not have the law of interest in place throughout the study periods just described. Missouri's donor pool (8 states) consisted of states that had a purchaser licensing law for the entirety of the study period.

For each model, the effect was estimated by determining the difference in postlaw means between the treated state and the synthetic control and calculating the percentage increase or decrease from the synthetic control. To assess whether the estimated effects of CBC and purchaser licensing laws were unusual with respect to effects that would be estimated in other states, we performed placebo tests with all states in the donor pool for each law change.<sup>17</sup> The estimated effect for the treated state was compared with the placebo effect distribution estimated from the donor states. To make a reliable inference, we had to find that only a small proportion of control states had a more extreme placebo effect estimate than the effect estimated for the true treated state. We used this proportion as a permutation distribution pseudo *P* value. Because a synthetic control that adequately fit the preintervention data could not be estimated for

each donor state, we restricted the placebo tests to the subset of donor states with prelaw MSPEs less than 5 times the treated state's prelaw MSPE to avoid comparisons with synthetic controls that had poor fits.

We used death certificate data obtained from the National Center for Health Statistics through the CDC WONDER database to generate homicide and suicide mortality rates.<sup>20</sup> Because annual state suicide data are often volatile, we smoothed suicide mortality rates by analyzing 3-year moving averages. Annual state-level predictors were chosen on the basis of prior research and theoretical relationships between sociodemographic variables and the dependent variables of interest.

For homicide, state-level predictors were population size, law enforcement expenditures per capita, law enforcement officer population, percentage of the population identifying as Black, percentage of the population identifying as Latino, the Gini coefficient (a measure of income inequality), percentage of the population 15 to 24 years of age, percentage of the population 0 to 18 years of age, percentage of the population living in a metropolitan statistical area, robbery rate, population density, poverty rate, jobs per capita, average individual income per capita, unemployment rate, and incarceration rate.

For suicide, the predictors were unemployment rate, poverty rate, percentage of the population identifying as male, percentage of the population reporting being married, percentage of the population identifying as Black, percentage of the population identifying as a veteran, percentage of the population living in a metropolitan statistical area, ethanol consumption per capita, religious adherence, educational attainment, and overdose rate.

Each model included prelaw averages for all of these predictors and values of the outcome variable for every other prelaw year. When necessary, missing predictor data from intercensal years were interpolated. These data were obtained from the Bureau of Economic Analysis,<sup>21</sup> the Bureau of Labor Statistics,<sup>22</sup> the Census Bureau,<sup>23</sup> and the Federal Bureau of Investigation's Uniform Crime Report.<sup>24</sup>

## RESULTS

The synthetic control models revealed no consistent relationship between

comprehensive background check laws and firearm mortality in Maryland and Pennsylvania. There were, however, consistent relationships between firearm mortality and purchaser licensing laws in Connecticut and Missouri. Measures of synthetic control model fit, donor states contributing to each synthetic control, and donor weights are presented in Appendix Table A (available as a supplement to the online version of this article at <http://www.ajph.org>). The placebo results we report are the proportions of control states that had a more extreme placebo effect estimate than the effect estimated for the true treated state. We also report these proportions as fractions, with the number of states with a more extreme placebo effect estimate in the numerator and the number of total control states in the denominator. We restricted the denominator to the subset of donor states with prelaw MSPEs less than 5 times the treated state's prelaw MSPE.

### Comprehensive Background Check Laws

Results for Maryland and Pennsylvania are presented in Table 1. After implementation of a CBC law (1996–2013), Maryland saw a 17.5% increase in firearm homicide rates relative to its synthetic control (placebo = 0.06; 2/32) and a 33.2% increase in nonfirearm homicide rates (placebo = 0.06; 2/33). Maryland's firearm suicide rate was 15.4% lower than that of its synthetic control following the state's passage of a CBC law

(placebo = 0.13; 3/24), but there was also a 21.8% decrease in nonfirearm suicides (placebo = 0.03; 1/32) relative to the synthetic control.

Pennsylvania's firearm homicide rate was 21.5% higher than that of its synthetic control for the post-CBC law period 1996 to 2017 (placebo = 0.13; 3/23), whereas its nonfirearm homicide rate was 10.0% lower (placebo = 0.26; 5/19). During the same period, Pennsylvania saw a 5.3% increase in firearm suicides relative to its synthetic control (placebo = 0.21; 4/19) and an 11.8% decrease in nonfirearm suicides (placebo = 0.09; 1/11).

We performed post hoc analyses to determine whether these results might be partially explained by factors unique to the largest cities in Maryland and Pennsylvania, which accounted for a substantial share of homicides in the 2 states. When Baltimore data were excluded from the Maryland model, the CBC law was associated with insignificant increases in both firearm (3.1%; placebo = 0.34; 11/32) and nonfirearm (10.8%; placebo = 0.17; 4/24) homicides. However, the estimated effect of the CBC law in Pennsylvania on firearm homicides did not diminish when Philadelphia data were excluded (23.9%; placebo = 0.14; 2/14). Nonfirearm homicides increased 4.1% in the model without Philadelphia (placebo = 0.33; 5/15).

### Purchaser Licensing Laws

Purchaser licensing laws were more clearly associated with changes in firearm homicide

rates (Table 2 and Figure 1). After implementation of Connecticut's licensing law, there was a 27.8% decrease in firearm homicides relative to the state's synthetic control from 1995 to 2017 (placebo = 0.03; 1/38). This effect was similar when deaths from the 2012 Newtown school shooting were removed from homicide counts (Appendix Table J, available as a supplement to the online version of this article at <http://www.ajph.org>; change = -24.2%; placebo = 0.00; 0/35). The estimate for the effect of Connecticut's licensing law is somewhat smaller if the data extend only to 2012, before focused deterrence programs curbed urban gang violence in several of the state's cities (Appendix Table I, available as a supplement to the online version of this article at <http://www.ajph.org>; change = -19.9%; placebo = 0.03; 1/34). Nonfirearm homicide rates did not change relative to the synthetic control over the period from 1995 to 2017 (placebo = 0.61; 20/33).

From the 1995 implementation of its law through 2017, Connecticut saw a 32.8% decrease in firearm suicides (Table 2 and Figure 2; placebo = 0.06; 2/35) and a 3.3% decrease in nonfirearm suicides (placebo = 0.60; 15/25) relative to its synthetic control. In 1999, Connecticut adopted a law akin to an extreme risk protection order law. Under this law, police are authorized to temporarily take guns from individuals when there is probable cause to believe that they are at imminent risk of injuring themselves or

**TABLE 1—Overall Synthetic Control Results for Point-of-Sale Comprehensive Background Check (CBC) Laws: Maryland and Pennsylvania, 1995 and 1996**

Model	Firearm			Nonfirearm		
	MSPE	Effect, %	Placebo No./Total No. (%) <sup>a</sup>	MSPE	Effect, %	Placebo No./Total No. (%) <sup>a</sup>
<b>Homicide</b>						
Maryland 1996 CBC law	0.531	+17.5	2/32 (0.06)	0.406	+33.2	2/33 (0.06)
Maryland 1996 CBC law (excluding Baltimore)	0.440	+3.1	11/32 (0.34)	0.055	+10.8	4/24 (0.17)
Pennsylvania 1995 CBC law	0.167	+21.5	3/23 (0.13)	0.057	-10.0	5/19 (0.26)
Pennsylvania 1995 CBC law (excluding Philadelphia)	0.044	+23.9	2/14 (0.14)	0.027	+4.1	5/15 (0.33)
<b>Suicide</b>						
Maryland 1996 CBC law	0.060	-15.4	3/24 (0.125)	0.053	-21.8	1/32 (0.03)
Pennsylvania 1995 CBC law	0.024	+5.3	4/19 (0.21)	0.003	-11.8	1/11 (0.09)

Note. MSPE = mean square predicted error.

<sup>a</sup>The placebo results reported are the proportions of control states that had a more extreme placebo effect estimate than the effect actually estimated for the true treated state. We restricted the denominator to the subset of donor states with prelaw MSPEs less than 5 times the treated state's prelaw MSPE.

TABLE 2—Overall Synthetic Control Results for Purchaser Licensing Laws: Connecticut and Missouri, 1995 and 2007

Model	Firearm			Nonfirearm		
	MSPE	Effect, %	Placebo No./Total No. (%) <sup>a</sup>	MSPE	Effect, %	Placebo No./Total No. (%) <sup>a</sup>
<b>Homicide</b>						
Connecticut 1995 purchaser licensing	0.371	-27.8	1/38 (0.03)	0.089	-0.7	20/33 (0.61)
Missouri 2007 purchaser licensing repeal	0.257	+47.3	0/6 (0.00)	0.037	+18.1	0/8 (0.00)
<b>Suicide</b>						
Connecticut 1995 purchaser licensing (through 2017)	0.109	-32.8	2/35 (0.06)	0.008	-3.3	15/25 (0.60)
Connecticut 1995 purchaser licensing (through 2006)		-23.2			-3.2	
Connecticut 1995 purchaser licensing (2007–2017)		-40.5			-3.4	
Missouri 2007 purchaser licensing repeal	0.208	+23.5	0/7 (0.00)	0.065	+6.9	1/4 (0.25)

Note. MSPE = mean square predicted error.

<sup>a</sup>The placebo results reported are the proportions of control states that had a more extreme placebo effect estimate than the effect actually estimated for the true treated state. We restricted the denominator to the subset of donor states with prelaw MSPEs less than 5 times the treated state's prelaw MSPE.

others. Despite this law, very few gun removals were carried out until 2007, after the mass shooting at Virginia Tech.<sup>25</sup> Research has shown that individuals subjected to these orders are more often suicidal than homicidal and that the removal law is associated with decreases in firearm suicides.<sup>26,27</sup>

To examine the possible effects of the removal law on our models of firearm and nonfirearm suicides in Connecticut, we split the effect estimate into 2 periods: 1995 to 2006 and 2007 to 2017. From 1995 to 2006, there was a 23.2% decrease in firearm suicides and a 3.2% decrease in nonfirearm suicides in Connecticut relative to the synthetic control. From 2007 to 2017, there was a 40.5% decrease in firearm suicides and a 3.4% decrease in nonfirearm suicides.

From 2007 to 2016, following the repeal of its purchaser licensing law, Missouri's firearm homicide rate rose 47.3% relative to its synthetic control (Table 2 and Figure 1; placebo = 0.00; 0/6). Over the same period, there was an 18.1% increase in nonfirearm homicides relative to the synthetic control (placebo = 0.00; 0/8). The estimated effect on firearm homicides was 2.6 times larger than that for nonfirearm homicides. There was an abrupt increase in firearm homicides immediately after the law's repeal and no such change in nonfirearm homicides (Figure 1 and Appendix Figure F, available as a supplement to the online version of this article at <http://www.ajph.org>). Missouri's repeal of handgun purchaser licensing was associated with a 23.5% increase in firearm suicides

(placebo = 0.00; 0/7) and a 6.9% increase in nonfirearm suicides (placebo = 0.25; 1/4) relative to the synthetic control (Table 2). Full truncated 10-year model results for Connecticut, Maryland, and Pennsylvania, as well as additional figures for all 4 states, are available in the appendix.

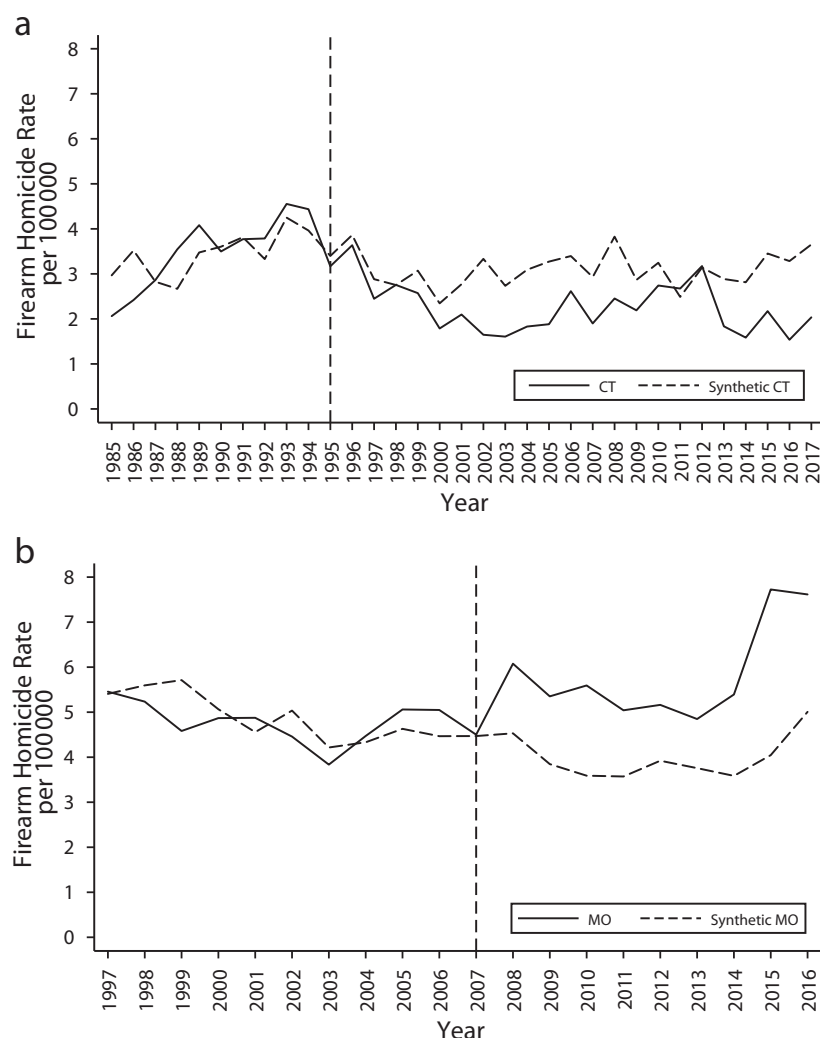
## DISCUSSION

Across the 4 state law changes examined in this study, purchaser licensing laws were consistently associated with lower rates of both firearm homicides and firearm suicides, but point-of-sale CBC laws were not. Relative to Connecticut's synthetic control, we estimated a 27.8% overall decrease in the state's firearm homicide rate and a 32.8% overall decrease in its firearm suicide rate. The decrease in firearm suicides was somewhat greater after the 2007 implementation of a risk-based firearm removal law. Although this could indicate complementary effects of Connecticut's purchaser licensing and gun removal laws, the number of removal orders is likely too small to achieve population-wide effects. A more plausible explanation is that suicide mortality continued to decrease because of a growing effect of licensing stemming from reduced access to firearms in the state. For Missouri, we estimated a 47.3% overall increase in firearm homicides and a 23.5% increase in firearm suicides. In tandem, the estimates for Connecticut and Missouri suggest that purchaser licensing laws are protective.

Our results are consistent with prior studies that also revealed protective effects of Connecticut's and Missouri's handgun purchaser laws.<sup>11–14</sup> Our study provides additional years of data and new statistical models that indicate larger protective effects for suicides in both states. In comparison with previous studies, our estimates of changes in firearm homicide rates associated with purchaser licensing were larger in the case of Missouri and smaller in the case of Connecticut. Other studies designed to estimate average associations across many law changes have also shown that licensing laws are associated with lower rates of firearm-related homicides<sup>5</sup> and suicides,<sup>12</sup> fewer fatal mass shootings,<sup>28</sup> and fewer instances of law enforcement officers shot in the line of duty.<sup>29</sup>

Although there were increases in Missouri in both firearm and nonfirearm mortality, the differences in firearm mortality were 2.6 times larger. The increase in nonfirearm homicides coincident with the repeal of Missouri's licensing law may indicate that other factors affected mortality rates in Missouri after the repeal of its licensing law and that the actual effect on firearm mortality was somewhat smaller than our estimate. In a recent study incorporating data through 2016, there was an estimated 27% increase in firearm homicides when changes in Missouri were compared with those in states from the region with similarly high baseline homicide rates.<sup>14</sup>

Maryland's CBC law was associated with increases in homicide rates; however, the increases were specific to Baltimore and were



**FIGURE 1—Effects of Purchaser Licensing Laws on Firearm Homicides in (a) Connecticut (Adopted 1995) and (b) Missouri (Repealed 2007)**

not evident in the rest of the state. This suggests that either conditions in Baltimore modified the law's effect or the estimate of the law's effect was biased by unmeasured confounders. It is unclear how to interpret the positive association between Pennsylvania's CBC law and homicide rates. If the law substantially limited the ability of potential homicide victims to access firearms and successfully defend themselves, one would expect an even greater harmful effect of licensing. Yet, licensing laws were linked to lower homicide rates.

Consistent with previous longitudinal studies,<sup>6,7</sup> CBC laws in Maryland and

Pennsylvania did not appear to reduce firearm suicides. Although Maryland experienced a decrease in firearm suicides after implementation of a CBC law, there was an even larger percentage decrease in nonfirearm suicides. This latter drop was more unusual in contrast to placebo states, suggesting that other factors may have been contributing to changing suicide rates in Maryland.

Comprehensive background check requirements may be necessary to prevent prohibited individuals from accessing firearms; without purchaser licensing requirements, however, they may be insufficient to achieve this objective and prevent lethal gun violence.

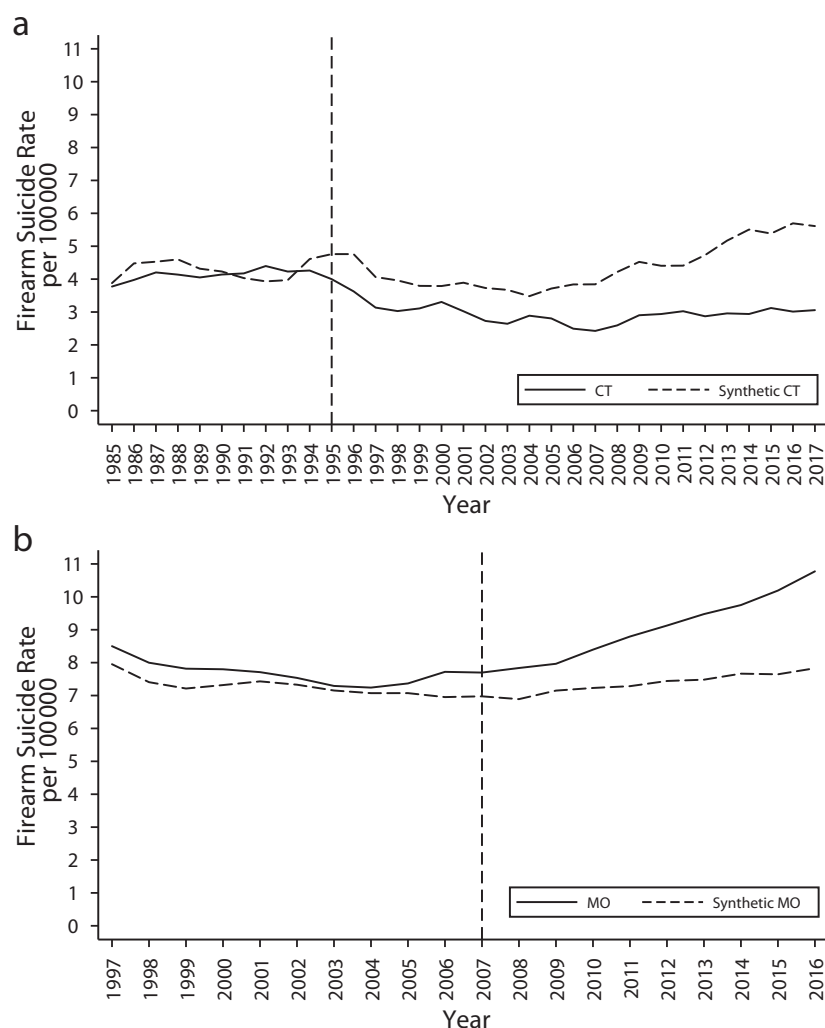
The effectiveness of CBC laws could be enhanced by more robust efforts to enforce the laws and promote compliance, broader prohibiting conditions, better record keeping, and expanded time to complete the checks.<sup>30</sup> A prior study documented infrequent enforcement of Maryland's and Pennsylvania's CBC laws,<sup>31</sup> which weakens the laws' capacity to deter illegal transfers of firearms. When Maryland added handgun purchaser licensing requirements to its CBC law in 2013, diversions of guns for criminal use shortly after retail sales dropped dramatically.<sup>32</sup> This suggests that point-of-sale CBC requirements in Maryland were an insufficient deterrent to illegal diversions without purchaser licensing.

There are multiple reasons that firearm purchaser licensing might be more effective than point-of-sale CBC laws without licensing. Purchaser licensing requires vetting procedures that are more robust than is the case for point-of-sale CBC laws. This may deter individuals who might otherwise buy guns with the intention of criminal misuse or for transfer to a prohibited individual. States with purchaser licensing laws allow more time for vetting purchase applications and often check more complete sources of state data on prohibiting conditions than is the case under point-of-sale CBC laws. Firearm purchaser licensing also makes it easier for private sellers to verify that a prospective buyer is not prohibited from purchasing a firearm. Finally, licensing increases the real cost of purchasing firearms with additional time commitments and licensing fees. This likely reduces firearm ownership and the number of guns within a population.

The process required to obtain a purchaser license may also be protective with respect to suicide. It is much more difficult for individuals to make an impulsive decision to purchase a firearm if they need to secure a license first. Many suicide attempts occur within minutes or hours of initial suicidal ideation.<sup>33</sup> Longer waiting periods between applying to purchase firearms and receiving the firearms are associated with lower rates of firearm homicides and suicides.<sup>34</sup>

This study has potential limitations. First, we examined a limited number of law changes. For purchaser licensing, we assessed the only 2 law changes for which there were at least 5 years of postlaw data available. For CBC law changes, prior law changes since





**FIGURE 2—Effects of Purchaser Licensing Laws on Firearm Suicides in (a) Connecticut (Adopted 1995) and (b) Missouri (Repealed 2007)**

1990 had already been evaluated,<sup>9</sup> and recent changes provided few postlaw data points. Second, although the synthetic control method is a robust strategy for estimating policy effects, the control pool for our analyses was somewhat limited in the case of Missouri.

Third, we sought to expand on previous work by extending the time period for each model to include the latest possible year of data. Our results are, therefore, more informative, but longer postlaw periods may create some uncertainty with respect to the capability of the models to accurately estimate the counterfactual. Finally, visual analysis of some of our synthetic control plots revealed that

although the prelaw MSPE was minimized, there was a separation between the synthetic control and the treated state just before a law change. Such separation prior to a change could be random variation or could be indicative of unmeasured factors influencing trends between prelaw and postlaw change periods that might bias effect estimates.

Despite these limitations, our analyses have many strengths. We used a rigorous statistical method that minimizes errors in model prediction. We contrasted the patterns of estimated law effects across firearm and nonfirearm homicides and suicides to assess whether estimated effects were specific to

deaths involving firearms. The CBC laws and one of the purchaser licensing laws were all adopted in 1995 or 1996, allowing for comparisons within the same historical period. We offered a fourth law change, Missouri's repeal of purchaser licensing during a time of relatively stability in homicide trends in Missouri and nationwide, to contrast with Connecticut's implementation of purchaser licensing in a different region and time period.

Although data on public support for firearm policies reveal somewhat broader support for CBC laws than is the case for purchaser licensing, a 2019 national survey reported 77% support for handgun purchaser licensing.<sup>35</sup> CBC laws are critical for keeping firearms from high-risk individuals, but they may be insufficient to significantly reduce firearm mortality without purchaser licensing. *AJPH*

#### CONTRIBUTORS

A. D. McCourt led the writing and analyses. A. D. McCourt, C. K. Crifasi, E. A. Stuart, J. S. Vernick, and D. W. Webster designed the study and statistical analyses. R. M. C. Kagawa and G. J. Wintemute provided critical review and interpretation of the data, analyses, and findings. All of the authors contributed to data interpretation and critical revisions of the article.

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#### CONFLICTS OF INTEREST

The authors have no conflicts of interest to disclose.

#### HUMAN PARTICIPANT PROTECTION

No protocol approval was needed for this study because secondary data sources were used to analyze aggregated mortality rates.

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**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that on this 3rd day of August, the foregoing was served, via electronic delivery, to all parties' counsel via the Court's appellate CM/ECF system which will forward copies to Counsel of Record.

/s/ John Parker Sweeney  
John Parker Sweeney